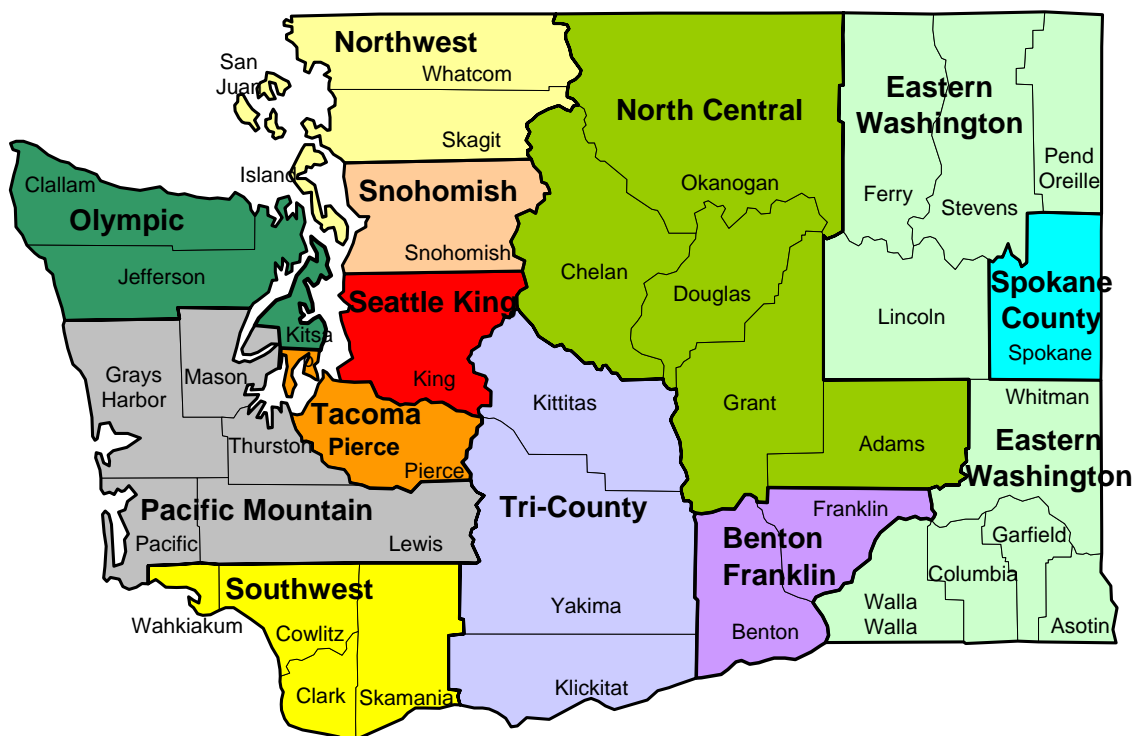


VII. Regional Needs

Regional analysis is based on Workforce Development Areas (WDA) (see Appendix C) with an additional area of special analysis which includes the Snohomish WDA and part of the Northwest Washington WDA to include Snohomish, Island, and Skagit counties (SIS). The thirteen regional profiles included in this section provide regional measures of student, community, and workforce needs for higher education.

Figure 13
Workforce Development Areas



Regional Student Demand

Regional education supply will focus on two aspects of supply. First, institutions located within a region are identified. Second, institutions serving an area based on student enrollment patterns are described.

Regional student demand is assessed based on a measure of access to higher education. For this purpose, the participation rate for the region will be compared with the state average participation rate (taking differences in distribution of age by region into account).

Workforce Needs

Workforce supply is not regionalized because a number of programs are limited to only one or a few institutions in the state; however, because there are significant regional differences in the growth and need for specific occupations by region, the analysis will include data on key occupations in the region requiring mid-term and long-term training.

Regional Community Needs

Each region has unique needs and developmental goals. The community needs analyses will consider regional development goals for region, industry, or demographic changes not accounted for in other estimates or other information about the region that may impact academic planning.

Statewide Programs

Certain programs and major lines of study are uniquely assigned to one institution or offered by a limited number of institutions in the state (RCW 28B.10.100, RCW 28B.10.120). See Appendix D for a listing of current statewide programs. The HECB may recommend changes to these designations as part of the needs assessment process (RCW 28B.76.230) and its review of institutional role and mission (RCW 28B.76.200).

Regional Needs Assessment Summary

Student Demand: Growth “Pressure Points”

Regions in which we anticipate the greatest enrollment pressure due to population increases include Southwest Washington, Skagit, Island, and Snohomish (SIS) Counties, and King County. The first two regions are projected to need at least a 15 percent increase over current enrollments to accommodate greater numbers of students due to population growth. Growth in the SIS region is primarily driven by projected population increases in Snohomish County. It is also of note that there will be a significant need for enrollment increases in King County. Though the percentage increase is only nine percent, the total FTE increase is 3,651, the largest anticipated

increase in the state. In total, projected FTE growth from these three regions resulting from anticipated population growth accounts for roughly 54 percent of total state growth projections.

The Southwest region is already served by a branch campus of Washington State University and recommended growth in enrollment follows with previous recommendations made by the HECB to expand the WSU-Vancouver campus to include lower-division students. The HECB, NBBJ of Seattle, and MGT of Olympia are currently conducting additional analyses to identify both the unmet higher education needs in Snohomish, Island, and Skagit Counties as well as the most appropriate and cost-effective delivery methods. King County has a solid institutional infrastructure in place that will likely need to be expanded to accommodate increased enrollments before 2010. The state's community and technical colleges continue to provide roughly 67 percent of all state funded public enrollments and 84 percent of lower-division enrollments in Southwest Washington, King County, and SIS. Given the high percentage of students who enroll in community and technical colleges, capacity at these institutions must increase to meet future demand.

Student Demand: Room for Growth

There are several regions that have large disparity between their region's participation in higher education and the state average, including Southwest, Northwest, Tri-County, and Eastern regions. Each of these areas would need to increase their current enrollments by 30 percent over current levels to match the average participation rate for Washington.

Enrollment patterns from each region suggest that a large percentage of students stay within the region to attend college. For instance, 34 percent of students who call the Tri-County region home attend Central Washington University, 44 percent of students who attend a four-year institution from the Northwest region go to Western Washington University, and over 60 percent of four-year students from the Eastern region attend either Washington State University or Eastern Washington University (see appendices for further details). It is also of note that the Eastern and Tri-County regions are the only two in the state in which the majority of students who attend college do so at a four-year school.

The four regions are good targets for increasing the college participation rate and, subsequently, the number of degrees Washington produces. Not only does each of the regions exhibit the greatest gap between regional participation rates and the state average, each is already served by a public four-year institution that attracts high percentages of students from the region. As the state looks for different strategies for increasing the number of four-year degrees produced, both two- and four-year schools in each region could play active roles in encouraging more of their citizens to choose higher education.

Workforce Supply Trends

As is true with the rest of the nation, most regions within Washington are experiencing a shift away from manufacturing and toward service, technology, and other related industries. In

several less densely populated regions of the state, this trend has had an especially large impact on agribusiness and natural resource extraction industries (see regional reports for Olympic Consortium, Pacific Mountain Consortium, Tri-County, and Eastern). This trend has significant consequences for both two- and four-year higher education institutions.

First, the number of occupations which pay a “family wage” with no postsecondary education is decreasing; production and manufacturing jobs available to citizens with a high school degree are more scarce than they were in 1980 (Employment Security Department, 2005). Many of the jobs in the new regional economies require varying levels of college education and an increased number of people are projected to enter the system. Growth in health care occupations, including nurses and medical technicians (both require either associate degree or baccalaureate training), top almost every region’s list of key growth occupations. Expansion in the government sector is also common to almost every region. Key growth occupations in this category include teachers and educational support personnel as well as social workers and counselors. As the state continues to expand, many regions across the state also project growth in the construction sector and anticipate increased need for carpenters, electricians, and managers for construction trades. This trend is true for both urban and rural areas.

Although counties along the I-5 corridor match the rest of the state regarding projected increases in construction as well as in health care related fields, they differ from most other areas of the state due to the “clustering” of information and biomedical technology occupations. Each of the latter two categories is slated for increased growth, especially in King and Snohomish Counties. Two areas in Eastern Washington, the Tri-Cities area of the Benton-Franklin region and Spokane, also have technology clusters and anticipate significant growth in this sector.

Shifts in industrial patterns combined with the incorporation of high-tech operations into businesses in any sector increase the need for incumbent and displaced worker retraining. Employers in the majority of regions across the state are working with institutions, predominantly community colleges and technical schools, to help workers update their skills to remain competitive. Additionally, workforce boards have identified worker retraining as a key to their regions’ economic stability. In rural areas, planners are targeting distance education (via the World Wide Web or interactive television) to meet the postsecondary training needs of their citizens.

Olympic Consortium Regional Needs Assessment

Regional Student Demand

The Olympic Consortium includes Clallum, Jefferson, and Kitsap Counties and has a population of 335,327, roughly 71 percent of which lives in Kitsap County. The region has three colleges that provide regional enrollment data; one private non-profit four-year and two public two-year institutions providing 7,519 full time equivalent (FTE) enrollments (see Table 2). Several other institutions operate programs within the region but report enrollment data at a state level rather than by region; they are included in the “other” category.

Table 2
Colleges or Universities Located in the Olympic Consortium

Institution Sector	Name	Location	Size (FTE)
Private Non-Profit Four-Year	Northwest College of Art	Poulsbo	324
Public Two-Year	Olympic College	Bremerton	4,724
Public Two-Year	Peninsula College	Port Angeles	2,471
Public and Private Four-Year	Other ¹⁸	Various	—
Region Total			7,519

Source: Integrated Postsecondary Education Data System, Peer Analysis System.

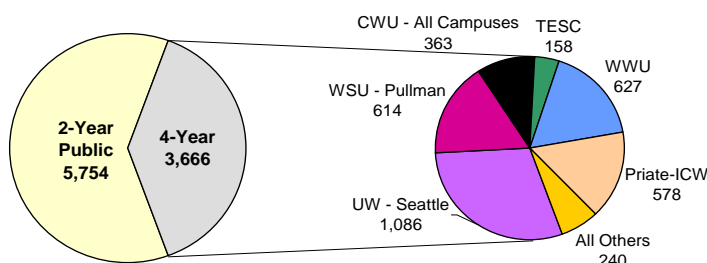
Student Preference

Approximately 9,420 people in the region attend college, 61 percent of whom attend a two-year school while the remaining 39 percent attend a four-year institution. The University of Washington’s Seattle campus is the most popular choice, with nearly one-third of students in the region enrolled. Washington State University and Western Washington University are second, attracting roughly the same percentage of students from the region (see Figure 14).

¹⁸ The “other” category includes City University, Northwest Indian College, Southern Illinois University, as well as limited degree programs from UW, WSU, and WWU. Enrollment data were not available for each institution individually, thus totals for the category could not be calculated.

Figure 14

Olympic Consortium
Total Enrollments by Home Region of Student
 2-Year: Public Community/Technical Colleges
 4-Year: Public and ICW

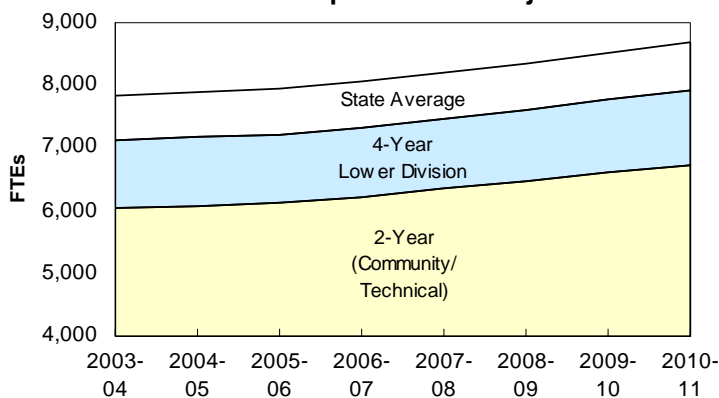


Source: Public: Higher Education Simulation Model, Version 1.15.
 Higher Education Coordinating Board, June 2005.
 ICW: survey of institutions.
 NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.
 4-year data include undergraduate, graduate and professional enrollments.

The population in the region is projected to continue its growth and, as a result, the number of enrollments from the region is also projected to increase if the same proportion of the population chooses to attend college. Based on the HECB simulation model, enrollments in the lower-division are projected to increase from 7,122 FTE in 2003-04 to 7,921 FTE in 2010-11, just to maintain the current regional participation rate. However, if participation rates in the region increased to meet the state average, then lower-division enrollments would reach 8,698 FTE by 2010 (see Figure 15).

Figure 15

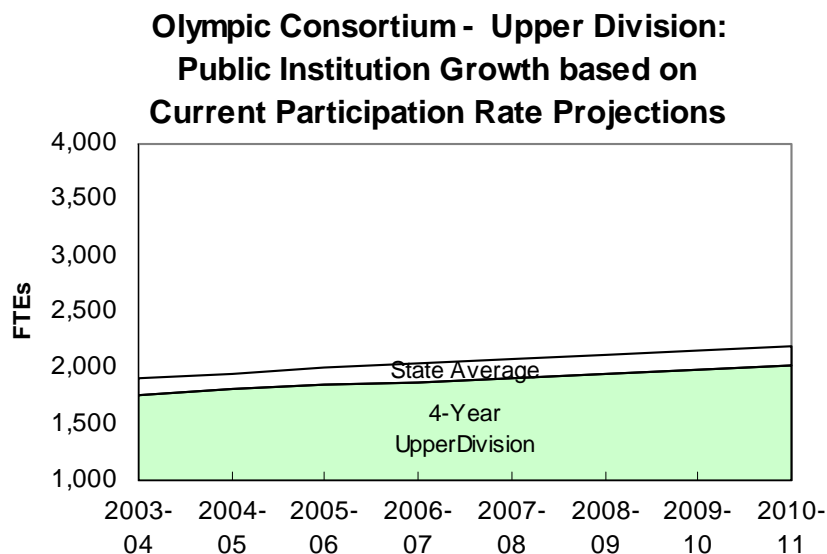
Olympic Consortium - Lower Division:
Public Institution Growth based on
Current Participation Rate Projections



Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

The same trend is true for upper-division enrollments. Based on population growth, enrollments would increase from 1,766 FTE in 2003-04 to 2,025 FTE in 2010-11. However, if a higher percentage of the population decided to go to college and, for instance, if preference matched the state average, enrollments would increase to 2,192 by 2010 (see Figure 16).

Figure 16



Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

Regional Workforce Demand

One of the key challenges facing the region is the decline of the timber, fishing, and military related industries and the transition to service and construction. Many of the high-wage jobs in the first group of industries, which required little formal education, are being replaced with either low-wage/low-skill jobs in service or construction sectors or high-wage/high-skill openings in government or health care related industries. The latter will require college training and local planners are working with businesses, citizens, and higher education to make sure that tomorrow's workforce is aware of this need.


Between 2002 and 2012, the counties of the Olympic Consortium are expected to have a diverse set of openings in key fields in the region. As mentioned above, occupations in the government sector, especially as they relate to education and the defense industry, will all be in high demand. Occupations related to health care are also projected to grow rapidly. The following tables produced by the Labor Market and Economic Analysis branch of the Employment Security Department list middle-level and long preparation occupations that they estimate will have the highest number of openings between now and 2012 (see Tables 3 and 4).

Table 3
Key Occupations Requiring Middle-Level Preparation

	Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)		
	Occupational Titles	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003 Estimated Mean Wage 2003
	Registered Nurses	77	1.1%
	Supervisors/Managers of Retail Sales Workers	69	1.3%
	Carpenters	62	12.1%
	Plumbers, Pipefitters, and Steamfitters	43	4.9%
	Electricians	43	10.8%
	Supervisors/Managers of Office and Administrative Support Workers	43	1.2%
	Installation, Maintenance, and Repair Workers, All Other	41	0.3%
	Supervisors/Managers of Construction Trades and Extraction Workers	39	1.2%
	Cooks, Restaurant	39	6.9%
	Maintenance and Repair Workers, General	30	2.2%
	Automotive Service Technicians and Mechanics	30	5.8%
	Welders, Cutters, Solderers, and Brazers	29	6.5%
	Supervisors/Managers of Mechanics, Installers, and Repairers	27	2.3%
	Supervisors/Managers of Food Preparation and Serving Workers	26	1.2%
	Drafters, Engineering, and Mapping Technicians, All Other	26	*N/A

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005.
 Available at www.workforceexplorer.com.

Table 4
Key Occupations Requiring Long Preparation

	Long Preparation		
	(Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)		
Occupational Titles	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Elementary School Teachers, Except Special Education	65	2.0%	\$43,930
Secondary School Teachers, Except Special and Vocational Education	49	2.0%	\$42,460
Teachers, Primary, Secondary, and Adult, All Other	40	1.9%	\$28,260
Middle School Teachers, Except Special and Vocational Education	37	2.0%	\$44,060
General and Operations Managers	31	1.6%	\$97,890
Accountants and Auditors	22	1.4%	\$53,240
Management Analysts	20	1.6%	\$60,740
Recreation Workers	19	1.4%	\$23,380
Rehabilitation Counselors	18	1.3%	\$30,660
Nuclear Engineers	18	0.7%	\$66,720
Mechanical Engineers	17	1.0%	\$69,790
Insurance Sales Agents	15	2.3%	\$34,860
Electronics Engineers, Except Computer	15	1.1%	\$73,320
Computer Programmers	13	1.7%	\$66,000
Dentists	13	2.3%	\$197,190
* - Mean Annual Wages are unavailable for occupation			

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005.
 Available at www.workforceexplorer.com.

Regional Community Demand

As noted earlier in the analysis, the Olympic Consortium is going through some transition in their industry patterns. Decline in the timber, lumber, and fishing industries has been replaced with growth in service and construction. The federal government remains a significant employer (the largest in Kitsap County) which stimulates “spill-over” expansion in the retail and service sectors as well as in engineering and management. Thus, it appears that both workforce preparatory and baccalaureate education will continue to be required by local employers. However, it is also of note that many youth in the region are migrating to the I-5 corridor for education and employment opportunities. Regional planners have, therefore, made it a goal in their strategic plan to work with employers and higher education institutions to increase access and make youth aware of opportunities within the region.

Pacific Mountain Consortium Needs Assessment

Regional Student Demand

The Pacific Mountain Consortium includes the five counties of Grays Harbor, Thurston, Mason, Pacific, and Lewis with a population of 434,992. The region has five colleges: one public four-year, one private four-year, and three public two-year institutions that provide 11,909 full-time equivalent (FTE) enrollments (see Table 5).

Table 5
Colleges or Universities Located in the Pacific Mountain Consortium

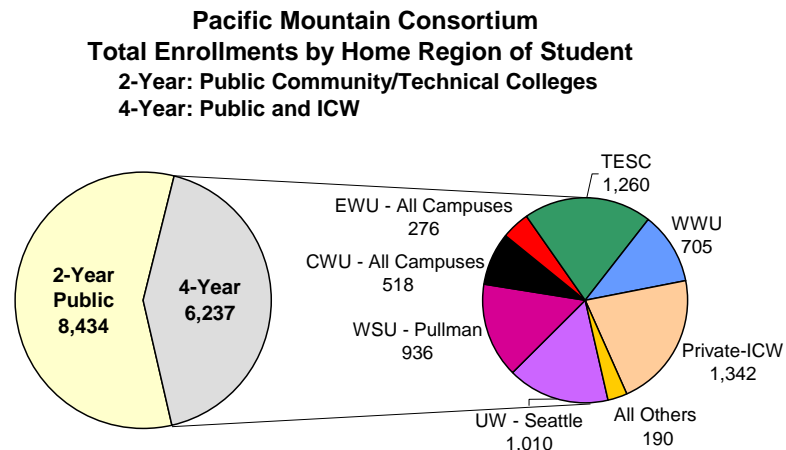
Institution Sector	Name	Location	Size (FTE)
Public Four-Year	The Evergreen State College	Olympia	3,957
Private Non-Profit Four-Year	Saint Martin's University	Lacey	581
Public Two-Year	Centralia College	Centralia	2,129
Public Two-Year	Grays Harbor College	Aberdeen	1,647
Public Two-Year	South Puget Sound Community College	Olympia	3,595
Region Total			11,909

Source: Integrated Postsecondary Education Data System, Peer Analysis System.

Student Preference

Roughly 14,671 students from the region attend college and almost 43 percent of them do so at a four-year institution. Of those students, 22 percent prefer to attend private four-year schools, while The Evergreen State College draws the largest number of students who attend a public university. The Evergreen State College is closely followed by the University of Washington and Washington State University in the number of enrollments from the region (see Figure 17).

Figure 17



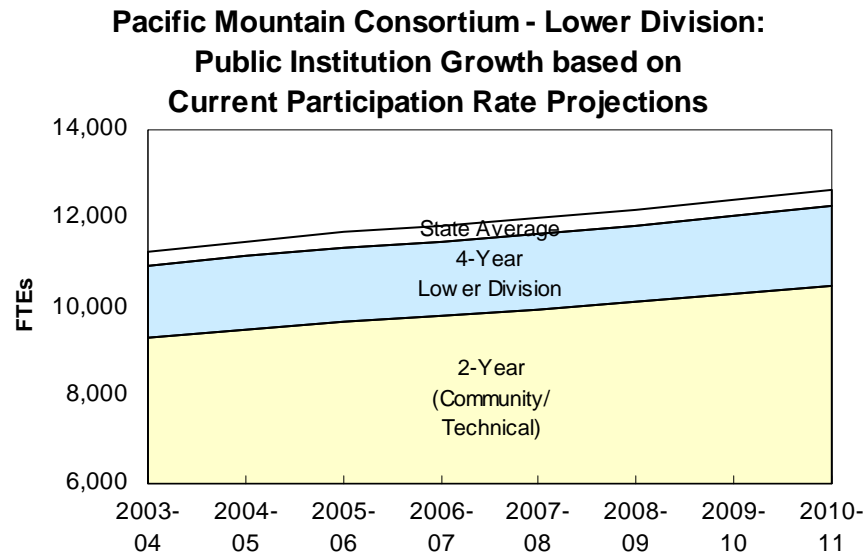
Source: Public: Higher Education Simulation Model, Version 1.15.
 Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.
 4-year data include undergraduate, graduate and professional enrollments.

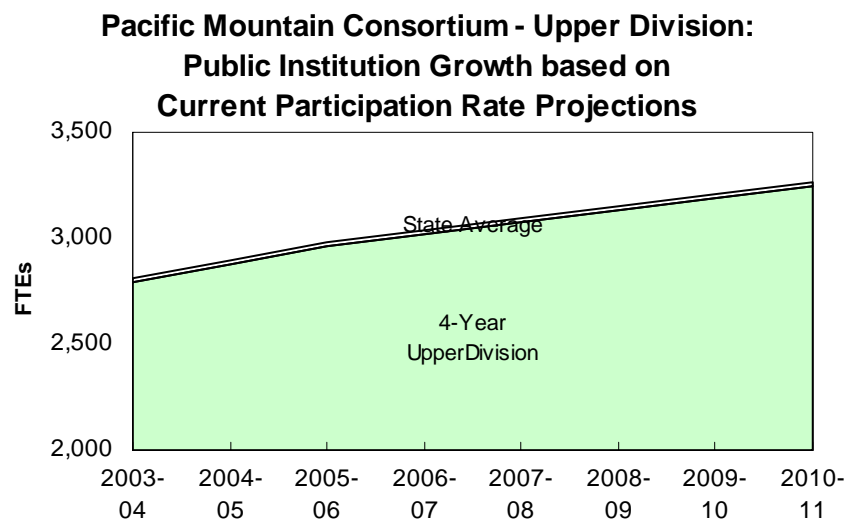
The Pacific Mountain region continues to experience population growth and the state will need to increase capacity to achieve the current level of service for Pacific Mountain students. Based on HECB lower-division enrollment projections, FTEs will increase from 10,914 in 2003-04 to 12,284 in 2010-11, provided that the same percentage of the population opts to attend college. This percentage, or participation rate, is very close to the state average. However, if the rate were to match the state average in the region, an additional 371 FTEs would be needed, bringing the enrollment projection to 12,655 in 2010-11 (see Figure 18).

Figure 18



The same trend is true for upper-division students, in which enrollments would need to increase from 2,795 FTE in 2003-04 to 3,242 FTE in 2010-11. However, the upper-division participation essentially matches the state average, requiring only 20 additional FTE to exactly match (see Figure 19).


Figure 19



Regional Workforce Demand


The five counties that make up the Pacific Mountain region, with the exception of Thurston, have been dependent on the foresting and lumber products industries for the highest share of employment. Despite continued importance, this sector has been in decline for the past several years and new areas of growth have begun to replace some of the timber sector jobs. Above average growth projections in the health care, service, wholesale/retail trade, and tourism sectors have created new jobs, many of which require college education. Government has also provided a high percentage of employment, especially in Thurston County, and need for educational professionals, technology staff, and finance specialists is also projected to grow. Information regarding key middle-level and long preparation occupations is summarized in Tables 6 and 7 below.

Table 6
Key Occupations Requiring Middle-Level Preparation

	Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)		
	Occupational Titles	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003
Registered Nurses	100	0.9%	*N/A
Supervisors/Managers of Retail Sales Workers	80	2.5%	\$41,440
Carpenters	79	15.8%	\$39,110
Supervisors/Managers of Office and Administrative Support Workers	58	1.3%	\$42,400
Maintenance and Repair Workers, General	50	2.6%	\$35,740
Cooks, Restaurant	44	7.3%	\$21,200
Automotive Service Technicians and Mechanics	38	7.3%	\$35,010
Supervisors/Managers of Food Preparation and Serving Workers	37	1.2%	\$30,540
Police and Sheriff's Patrol Officers	37	2.3%	\$48,840
Computer Support Specialists	36	3.1%	\$45,920
Electricians	35	14.3%	\$54,900
Cooks, Institution and Cafeteria	34	6.0%	\$23,960
Supervisors/Managers of Construction Trades and Extraction Workers	33	2.5%	\$53,530
Licensed Practical and Licensed Vocational Nurses	30	2.5%	\$32,450
Medical Secretaries	27	1.7%	\$27,820

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005.
Available at www.workforceexplorer.com.

Table 7
Key Occupations Requiring Long Preparation

	Long Preparation (Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)		
	Occupational Titles	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003 Estimated Mean Wage 2003
	Elementary School Teachers, Except Special Education	81	\$43,290
	Secondary School Teachers, Except Special and Voc. Education	75	\$42,250
	Accountants and Auditors	73	\$50,440
	Teachers, Primary, Secondary, and Adult, All Other	54	\$31,430
	General and Operations Managers	49	\$100,470
	Computer Programmers	45	\$55,820
	Rehabilitation Counselors	42	\$29,140
	Middle School Teachers, Except Special and Voc. Education	37	\$42,760
	Civil Engineers	28	\$62,010
	Recreation Workers	25	\$22,420
	Administrative Law Judges, Adjudicators, and Hearing Officers	24	*N/A
	Lawyers	23	\$78,010
	Special Ed. Teachers, Preschool, Kindergarten, and Elementary School	20	\$43,450
	Construction Managers	19	\$74,130
	Counselors, Social, and Religious Workers, All Other	19	\$46,540
* - Mean Annual Wages are unavailable for occupation			

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005.
 Available at www.workforceexplorer.com.

Regional Community Demand

The Pacific Mountain region has completed significant analysis in identifying current and future labor market and skill needs. Planners are focused on attracting and retaining highly-skilled workers, especially in the health care, boat building, technology support, corrections, retail, and aquaculture industries. As mentioned above, the region has also long been dependent on the forestry and timber-related industries for its economic strength. However, due to its cyclical nature, technological advances, and the overall decline of the industry in the past decades, workers in the area are being forced to gain new training to fill gaps in emerging industries. Thus, an additional focus of regional planners has been training/upgrading for incumbent or displaced workers in partnership with the area's community colleges.

Northwest Regional Needs Assessment

Regional Student Demand

The Northwest region includes Whatcom, Skagit, Island, and San Juan Counties and has a population of 376,950, nearly 76 percent of which resides in Whatcom and Skagit Counties. The region has five colleges: one public four-year college (Western Washington University) and four public two-year institutions. In combination, the five institutions provide 19,980 full-time equivalent (FTE) enrollments (see Table 8).

Table 8
Colleges or Universities Located in the Northwest Region

Institution Sector	Name	Location	Size (FTE)
Public Four-Year	Western Washington University	Bellingham	10,899
Public Two-Year	Bellingham Technical College	Bellingham	1,710
Public Two-Year	Northwest Indian College	Bellingham	254
Public Two-Year	Skagit Valley College	Mt Vernon	4,059
Public Two-Year	Whatcom Community College	Bellingham	3,058
Region Total			19,980

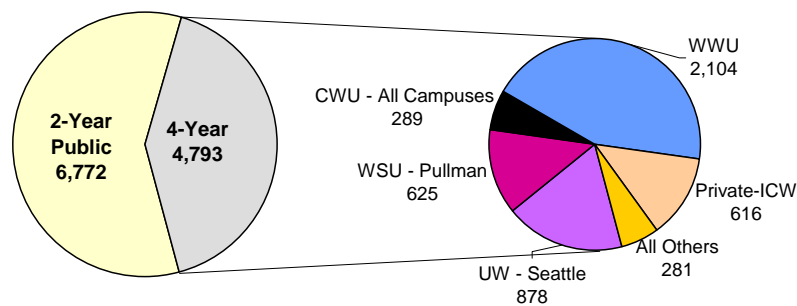
Source: Integrated Postsecondary Education Data System, Peer Analysis System.

Student Preference

The region is home to 11,565 students who are currently enrolled in college. Roughly 59 percent of these students attend community or technical colleges. One of the region's greatest strengths is the number of two-year and certificate programs being offered. Under the auspices of the Northwest Partnership for Workforce Development, business leaders, educators, and community leaders have worked together to examine how colleges and business can partner to educate and train the future workforce. This initiative includes a special focus on "lifelong learning" for working adults who need flexible access to retraining, especially given the region's substantial reduction in the aerospace, pulp/paper, and aluminum manufacturing industries.

The remaining 41 percent of students in the region go to four-year institutions (see Figure 20). Of those students who attend four-year schools, 44 percent attend nearby Western Washington University. This percentage is nearly two and a half times the enrollment of the nearest competitor, the University of Washington's Seattle campus.

Figure 20
Northwest Washington
Total Enrollments by Home Region of Student
 2-Year: Public Community/Technical Colleges
 4-Year: Public and ICW



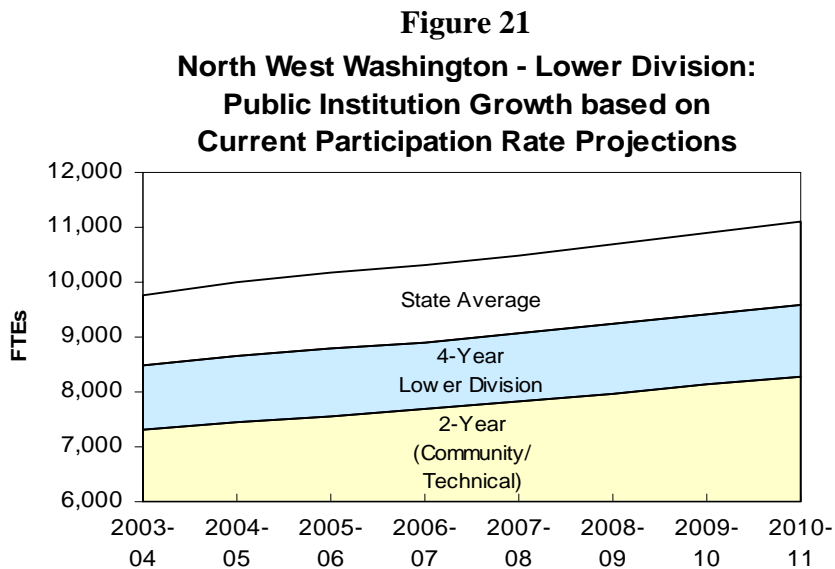
Source: Public: Higher Education Simulation Model, Version 1.15.
 Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

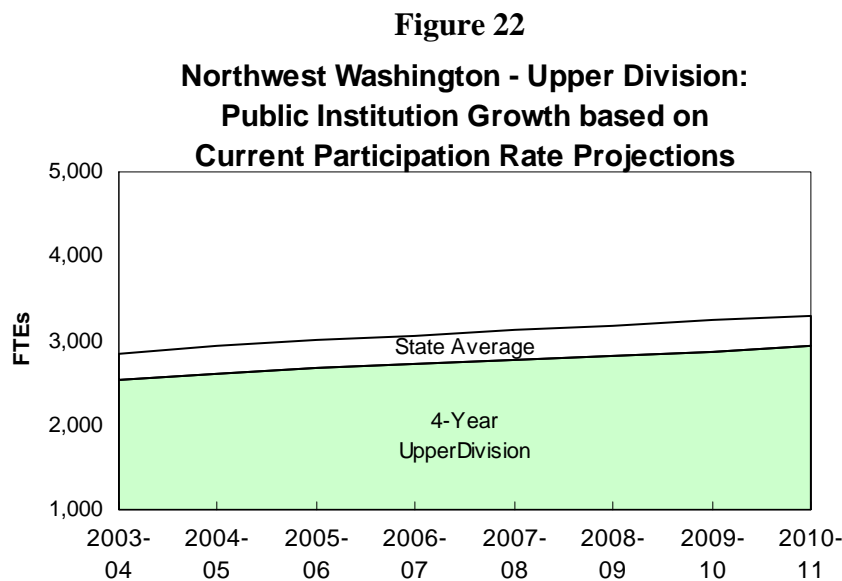
NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.

4-year data include undergraduate, graduate and professional enrollments.

The Northwest region continues to experience population growth and the state will need to increase capacity to provide the same level of access to Northwest students. Based on HECB lower-division enrollment projections, FTEs will need to increase from 8,492 in 2003-04 to 9,600 in 2010-11. Despite the presence of five higher education institutions, participation rates in the region remain lower than the state average. However, if participation rates in the region were to match the state average, lower-division enrollments would increase to 11,106 FTE by 2010-11. The same trend is true of upper-division, in which enrollments would need to increase from 2,540 FTE in 2003-04 to 2,933 in 2010-11. If upper-division participation rates were to match the state average, enrollments would increase to 3,297 FTE (see Figures 21 and 22).



Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.




Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

Regional Workforce Demand


Between 2002 and 2012, the counties of the Northwest region are expected to have approximately 1,332 annual job openings in middle-level and long preparation occupations. Occupations in government and educational fields continue to be in high demand, while the region is experiencing rapid expansion in health care related occupations, especially for registered nurses (see Tables 9 and 10).

Table 9
Key Occupations Requiring Middle-Level Preparation

Occupational Titles	 Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)		
	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Carpenters	119	10.3%	\$41,260
Supervisors/Managers of Retail Sales Workers	95	1.5%	\$39,140
Registered Nurses	91	0.9%	\$45,410
Electricians	62	11.5%	\$48,710
Cooks, Restaurant	60	4.7%	\$19,830
Maintenance and Repair Workers, General	58	2.2%	\$33,400
Supervisors/Managers of Construction Trades and Extraction Workers	52	2.0%	\$59,930
Supervisors/Managers of Office and Administrative Support Workers	51	1.7%	\$42,180
Supervisors/Managers of Food Preparation and Serving Workers	40	0.8%	\$29,290
Automotive Service Technicians and Mechanics	38	6.2%	\$38,040
Licensed Practical and Licensed Vocational Nurses	31	1.6%	\$31,130
Supervisors/Managers of Personal Service Workers	30	0.3%	\$37,220
Cooks, Institution and Cafeteria	30	5.5%	\$21,350
Plumbers, Pipefitters, and Steamfitters	29	21.5%	\$51,640
Police and Sheriff's Patrol Officers	27	1.7%	\$51,050

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Table 10
Key Occupations Requiring Long Preparation

Occupational Titles	 Long Preparation (Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)		
	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Elementary School Teachers, Except Special Education	83	0.3%	\$43,430
Secondary School Teachers, Except Special and Voc. Education	55	*N/A	\$43,800
Teachers, Primary, Secondary, and Adult, All Other	52	*N/A	\$27,600
Accountants and Auditors	52	3.0%	\$50,440
General and Operations Managers	46	0.9%	\$101,640
Construction Managers	35	4.4%	\$75,990
Recreation Workers	35	0.7%	\$18,250
Middle School Teachers, Except Special and Voc. Education	34	1.4%	\$42,440
Graphic Designers	26	1.8%	\$28,850
Rehabilitation Counselors	23	0.4%	\$32,590
Lawyers	18	0.4%	\$70,760
Insurance Sales Agents	17	1.9%	\$56,510
Special Ed. Teachers, Preschool, Kindergarten, and Elementary School	15	1.7%	\$41,960
Counselors, Social, and Religious Workers, All Other	14	*N/A	\$35,160
Child, Family, and School Social Workers	14	3.7%	\$33,920

* - Mean Annual Wages are unavailable for occupation

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Regional Community Demand

Strategic regional planning by local stakeholders utilizes a compilation of information sources to assess the need for a highly qualified workforce. As with any region, the need for higher education is driven by their specific industry patterns. The Northwest region has completed significant analysis in identifying current and future labor market and skills needs. Regional planners indicate that development in important regional industries like boat building, health care, and manufacturing are important to the continued vitality of the economic climate. Regional planners also note that small and medium size firms dominate the business environment and that the diversity provided by the small firms contributes to regional stability through economic recession. Planners also highlight incumbent worker training/upgrading and recruitment/training for construction and manufacturing occupations as workforce development priorities.

Snohomish County Needs Assessment

Regional Student Demand

Snohomish County is located on the northern part of the Puget Sound and has a population of 639,409. The area has grown roughly 5.5 percent since 2000 and that trend is projected to continue through 2010. The county has five colleges or universities; three private four-year, one private for-profit four-year, and two public two-year institutions. In combination, the five institutions provide 12,061 full time equivalent (FTE) enrollments (see Table 11).

Table 11
Colleges or Universities Located in the Snohomish County Region

Type of Institution	Number in Region	Size (FTEs)
Private Non-Profit Four-Year	3	484
Private For-Profit	1	1,172
Public Two-Year	2	10,405
Region Total		12,061

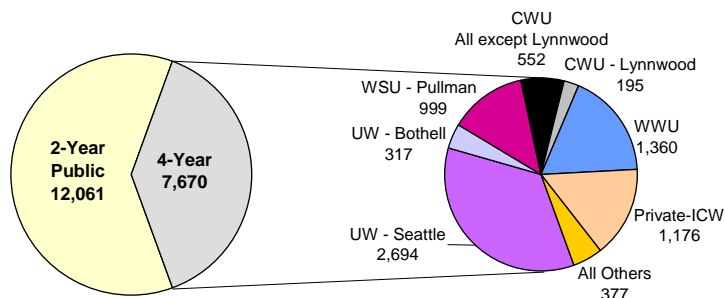
Source: Integrated Postsecondary Education Data System, Peer Analysis System.

Student Preference

The county is home to 19,731 students who are currently enrolled in college. Roughly 61 percent of these students attend community or technical colleges, while the remaining 39 percent go to four-year institutions (see Figure 23). Of those students who attend four-year schools, 35 percent attend the University of Washington at the main campus in Seattle. Another 317 students also attend UW, but at the Bothell campus. It is of note that this institution is located just outside the county border, but does include Snohomish County in its primary service area. The Lynnwood branch of Central Washington University, another four-year branch campus, serves 195 students from the region.

Figure 23

Snohomish
Total Enrollments by Home Region of Student
 2-Year: Public Community/Technical Colleges
 4-Year: Public and ICW



Source: Public: Higher Education Simulation Model, Version 1.15.

Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

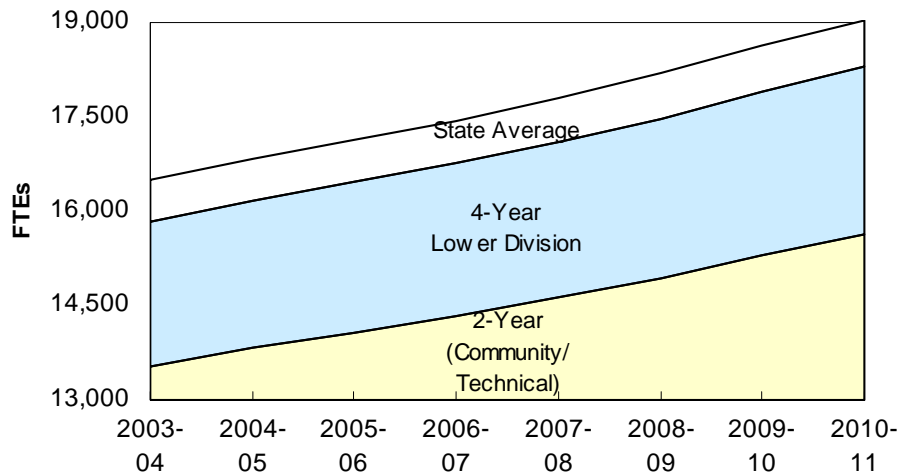
NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.

4-year data include undergraduate, graduate and professional enrollments.

Snohomish County has experienced significant population growth in the last decade and that trend is projected to continue. Based on this growth, lower-division enrollments will increase if the same percentage of the population continues to go to college. Based on HECB projections, enrollments would increase from 15,829 FTE in 2003-04 to 18,310 in 2010-11 (see Figure 24). However, if a higher percentage of people in the region elected to pursue higher education, an even larger increase in FTE is anticipated. For instance, if the regional participation rate matched the state average, lower-division enrollments would increase to 19,041 FTE in 2010-11.

Figure 24

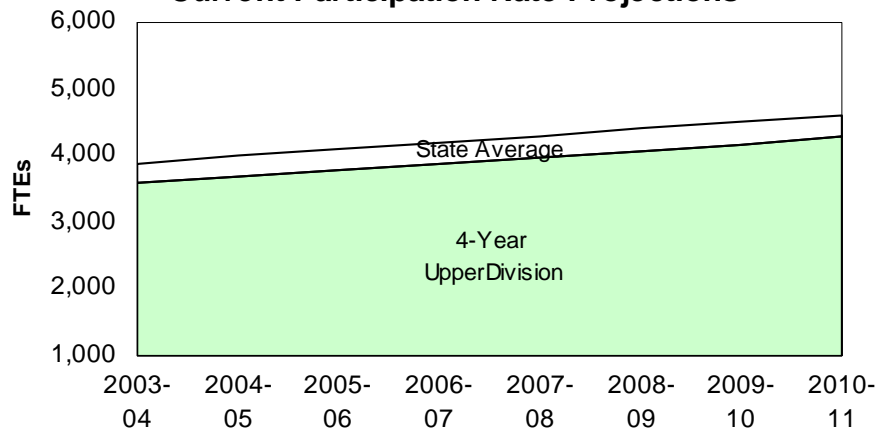
**Snohomish - Lower Division:
Public Institution Growth based on
Current Participation Rate Projections**



The same trend is true for enrollments in the upper-division. If the participation rate in the county remains the same, enrollments would increase from 3,590 FTE in 2003-04 to 4,276 in 2010-11. If the participation rate increased to match the state average, an additional 338 FTE would be projected for 2010-11 (see Figure 25).

Figure 25


**Snohomish - Upper Division:
Public Institution Growth based on
Current Participation Rate Projections**



Regional Workforce Demand


The economy of Snohomish County is diverse and requires a highly skilled workforce. The “backbone” of the regional economy continues to be manufacturing, predominantly in the aerospace sector. Roughly 25 percent of jobs in the county are in this sector, compared with five percent for adjacent King County and six percent for the rest of the state. Consequently, growth in several middle-level and long preparation key regional occupations are clustered in this area (see Table 12 and 13). Additionally, the county anticipates growth in the tourism, health care, biotechnology/bio-medical devices, and education sectors – employment trends that are also reflected in the tables on the following page.

Table 12
Key Occupations Requiring Middle-Level Preparation

	Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
	Occupational Titles			
	Carpenters	138	12.4%	\$46,260
	Registered Nurses	119	1.2%	\$58,900
	Supervisors/Managers of Retail Sales Workers	89	2.8%	\$46,810
	Supervisors/Managers of Office and Administrative Support Workers	82	2.7%	\$49,480
	Maintenance and Repair Workers, General	69	3.4%	\$36,690
	Supervisors/Managers of Construction Trades and Extraction Workers	67	3.0%	\$69,390
	Supervisors/Managers of Food Preparation and Serving Workers	56	1.9%	\$38,100
	Automotive Service Technicians and Mechanics	54	7.9%	\$38,590
	Supervisors/Managers of Production and Operating Workers	53	4.9%	\$54,540
	Cooks, Restaurant	53	6.0%	\$23,630
	Electricians	46	29.5%	\$59,950
	Aircraft Mechanics and Service Technicians	44	8.6%	\$45,960
	Machinists	34	21.2%	\$42,830
	Police and Sheriff's Patrol Officers	33	1.4%	\$57,000
	Supervisors/Managers of Mechanics, Installers, and Repairers	33	6.2%	\$56,670

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Table 13
Key Occupations Requiring Long Preparation

	Long Preparation (Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)		
	Occupational Titles	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003
			Estimated Mean Wage 2003
Aerospace Engineers		138 ***	1.7%
Elementary School Teachers, Except Special Education		128	0.2%
Secondary School Teachers, Except Special and Voc. Ed.		75	*N/A
Teachers, Primary, Secondary, and Adult, All Other		66	*N/A
General and Operations Managers		63	1.8%
Commercial and Industrial Designers		60	0.1%
Accountants and Auditors		57	8.8%
Middle School Teachers, Except Special and Voc. Ed.		50	0.6%
Management Analysts		46	0.6%
Purchasing Agents, Except Wholesale, Retail, and Farm Products		42	5.0%
Construction Managers		42	7.8%
Rehabilitation Counselors		38	0.2%
Counselors, Social, and Religious Workers, All Other		34	*N/A
Medical Scientists, Except Epidemiologists		28	3.1%
Industrial Engineers		27	10.7%
* - Mean Annual Wages are unavailable for occupation		*** - Openings are due to replacements	

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005.
 Available at www.workforceexplorer.com.

Community Demand

Strategic planning by local stakeholders leverages a number of different information sources to assess the need for a highly qualified workforce. The need for higher education in Snohomish County is especially strong, given the focus the county has on their “Innovation Economy.” Though this type of economy includes high-tech industries like biotechnology, medical devices, telecommunications, high-tech manufacturing, and software, it also refers to new ways of doing business in traditional sectors with rapidly changing technology, processes, and information. Thus, local planners point out that college access is increasingly important, not only to traditional age college students, but for older incumbent and dislocated workers as well. Planners are also focused on the continued development of economic infrastructure, especially in the areas of education, construction, public service, and health care – all of which will require some college-level training.

Seattle-King County Needs Assessment

Regional Student Demand

King County includes the urban center of Seattle, has a population of 1.7 million, and is home to one-third of the state's workforce. The county has 27 colleges or universities, including one public research extensive university, one public university branch campus, eight private non-profit colleges, six for-profit institutions, and eleven community and technical schools. In combination, the institutions provide 103,661 full-time equivalent enrollments (see Table 14).

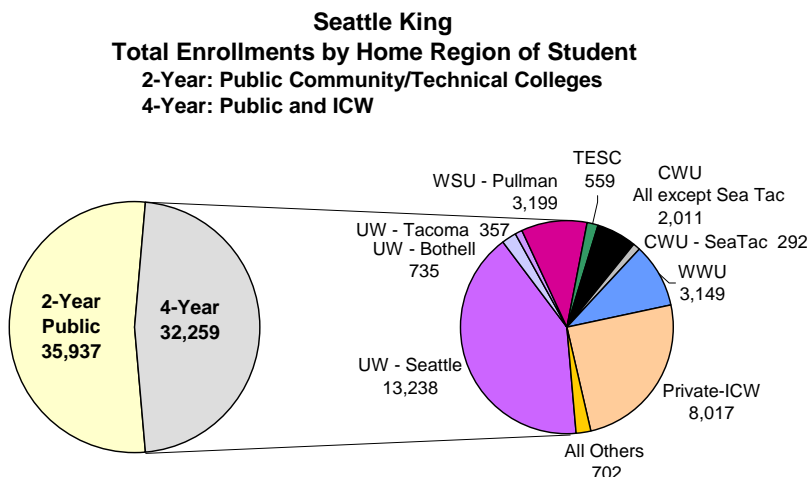
Table 14
Colleges or Universities Located in the Seattle-King County Region

Type of Institution	Number in Region	Size (FTEs)
Public Four-Year	1	31,829
Public Four-Year Branch Campus	1	1,259
Private Non-Profit Four-Year	8	16,828
Private For-Profit	6	6,843
Public Two-Year	11	46,902
Region Total		103,661

Source: Integrated Postsecondary Education Data System, Peer Analysis System.

Regional Student Preference

King County is home to 68,196 students who attend college, more than 2.5 times as many students as the next largest region of Pierce County. Of those students who attend college, nearly 53 percent go to a community or technical college (see Figure 26). The remaining 47 percent of students go to four-year schools and enrollments are heavily concentrated at the University of Washington. Between the three UW campuses of Seattle, Bothell, and Tacoma, UW accounts for 44 percent of King County's four-year enrollments. The second most popular choice for baccalaureate education is private non-profit institutions which account for 25 percent of enrollments; followed by an almost equal split between Washington State University and Western Washington University at 10 percent respectively.

Figure 26

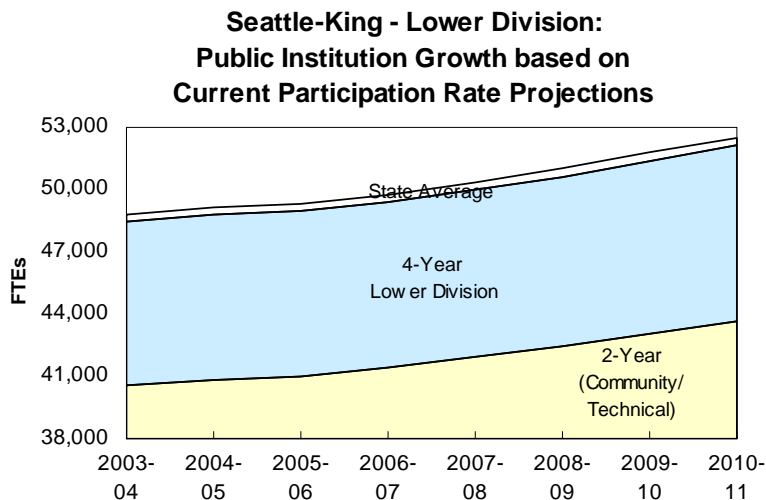
Source: Public: Higher Education Simulation Model, Version 1.15.
 Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.
 4-year data include undergraduate, graduate and professional enrollments.

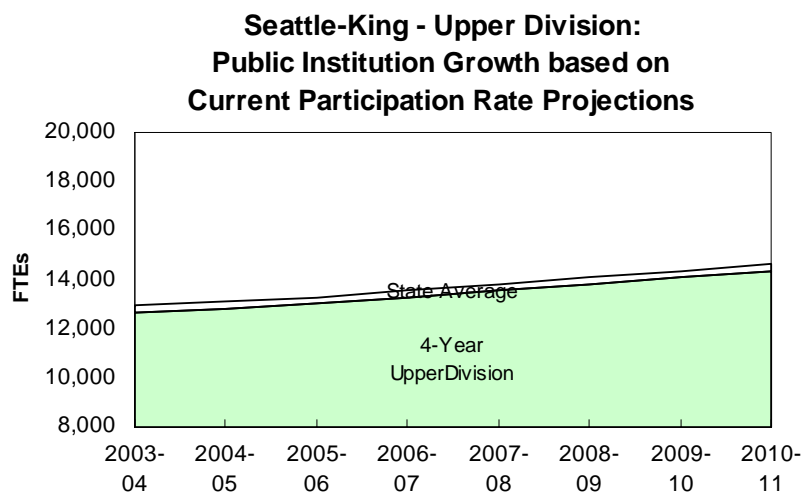
The population in King County is projected to grow rapidly for the next ten years in all regions of the county. Between 1990 and 2000, Seattle grew 9.1 percent, while North King grew at 9.4 percent, East King at 19.4 percent, and South King grew at 20 percent. As the population continues to increase, so will the demand for higher education. According to HECB projections based on population growth, lower-division enrollments would increase from 48,451 FTE in 2003-04 to 52,102 FTE in 2010-11, if the same percentage of the population choose to go to college (see Figure 27). Given that King County contains a large proportion of the state population, the county's participation rates weigh heavily in establishing the state average. However, King County does fall slightly short of the average and, if a higher percent of residents choose higher education to match the state average, then an additional 401 enrollments are projected, bringing the total 2010-11 projection to 52,503 FTE.

Figure 27



The same trend is true for upper-division enrollments, which are projected to increase from 12,950 FTE in 2003-04 to 14,360 FTE in 2010-11, based on population growth. Again, King County closely matches the state average in terms of the percent of people who attend college. Thus, an additional 292 enrollments would be anticipated if the county matched the average state participation rate (see Figure 28). It is of note that this analysis does not include data from private schools (ICW, private for-profits, etc.). Thus, the actual projections regarding participation rate may be higher than those included in this report, pushing the region's participation rate above the state average.

Figure 28



Regional Workforce Demand

As mentioned above, roughly one-third of the state's workforce is employed in King County and the past couple of years have been marked by slow but steady economic recovery (except in the manufacturing sector). Growth in key industries like construction and health care services signals demand for middle-level preparation occupations, while growth in many technology-related industries and education will require baccalaureate preparation (see Tables 15 and 16).

Table 15
Key Occupations Requiring Middle-Level Preparation

	Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)		
	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Occupational Titles			
Registered Nurses	786	0.5%	\$58,900
Carpenters	455	5.6%	\$46,260
Supervisors/Managers of Office and Administrative Support Workers	446	1.4%	\$49,480
Supervisors/Managers of Retail Sales Workers	434	1.5%	\$46,810
Cooks, Restaurant	324	3.0%	\$23,630
Computer Support Specialists	270	6.1%	\$50,010
Maintenance and Repair Workers, General	267	1.2%	\$36,690
Supervisors/Managers of Food Preparation and Serving Workers	258	1.4%	\$38,100
Supervisors/Managers of Non-Retail Sales Workers	220	0.6%	\$77,550
Computer Specialists, All Other	201	7.0%	\$66,410
Automotive Service Technicians and Mechanics	196	3.9%	\$38,590
Supervisors/Managers of Construction Trades and Extraction Workers	176	1.3%	\$69,390
Electricians	156	10.3%	\$59,950
Real Estate Sales Agents	143	0.5%	\$47,840
Supervisors/Managers of Mechanics, Installers, and Repairers	131	2.6%	\$56,670

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Table 16
Key Occupations Requiring Long Preparation

Long Preparation

(Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)

Occupational Titles

	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Computer Software Engineers, Applications	603	*N/A	\$81,280
Computer Programmers	484	3.5%	\$80,230
Computer Software Engineers, Systems Software	459	*N/A	\$81,750
Accountants and Auditors	407	4.1%	\$63,310
Elementary School Teachers, Except Special Education	373	0.3%	\$41,400
General and Operations Managers	323	1.2%	\$129,410
Management Analysts	262	0.5%	\$72,080
Civil Engineers	251	0.8%	\$74,940
Market Research Analysts	216	1.2%	\$78,420
Computer Systems Analysts	214	3.1%	\$69,200
Secondary School Teachers, Except Special and Voc. Ed.	196	*N/A	\$43,740
Teachers, Primary, Secondary, and Adult, All Others	190	*N/A	\$35,820
Lawyers	177	1.4%	\$100,980
Financial Managers	175	4.2%	\$98,640
Engineers, All Other	165	0.0%	\$75,010

* - Mean Annual Wages are unavailable for occupation

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Regional Community Demand

Seattle/King County is a hub for technological and scientific development. Though the county continues to rely on The Boeing Company for a large share of direct or related employment, planners point out that the local economy is diversifying. Growth in the research base as well as in health care services and construction offers proof of this diversity and requisite resiliency in times of economic downturn. Despite roughly 40 percent of the local population holding a baccalaureate degree or higher, employers report difficulty in finding qualified applicants, especially in health care and high-tech occupations. This is especially problematic for health-related services as future demand greatly outpaces current training capabilities. Local stakeholders are therefore concentrating their economic and educational development efforts in the information technology, health care, manufacturing, construction, and biotechnology/life sciences sectors to help get ahead of workforce demand shortages.

Pierce County Needs Assessment

Regional Student Demand

Pierce County is located at the southern end of the Puget Sound and has a population of 740,957 (2003 U.S. Census estimate). The county has eleven colleges and universities; one branch campus of a public four-year research institution, four private four-year, one private for-profit, and five public two-year institutions (see Table 17).¹⁹ In combination, these institutions provide 34,124 full time equivalent (FTE) enrollments.

Table 17
Colleges or Universities Located in the Pierce County Region

Type of Institution	Number in Region	Size (FTEs)
Public Four-Year (Branch Campus)	1	1,516
Private Non-Profit Four-Year	4	6,581
Private For-Profit	1	904
Public Two-Year	5	25,123
Region Total		34,124

Source: Integrated Postsecondary Education Data System, Peer Analysis System.

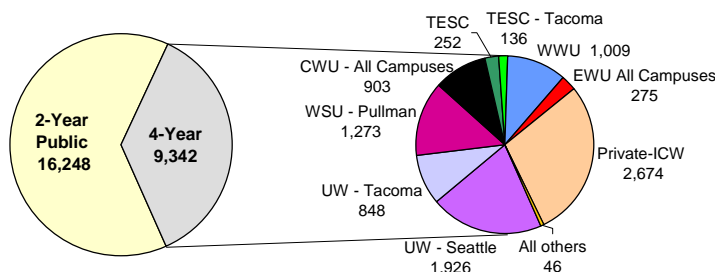
Student Preference

The region is home to 25,590 students who are currently enrolled in college. Just over 63 percent of these students attend community or technical schools, while the remaining 37 percent attend four-year institutions. Of those students who attend four-year schools, the largest percentage (29 percent) attend private four-year colleges. However, when both the Tacoma and Seattle campuses of the University of Washington are combined, UW attracts the highest percentage of Pierce County students with 30 percent (see Figure 29).

¹⁹ The institutions in the county include Bates Technical College, Clover Park Technical College, Pierce College District, Tacoma Community College, University of Washington-Tacoma, Pacific Lutheran University, University of Puget Sound, and The Evergreen State College in Tacoma.

Figure 29

Tacoma Pierce
Total Enrollments by Home Region of Student
 2-Year: Public Community/Technical Colleges
 4-Year: Public and ICW



Source: Public: Higher Education Simulation Model, Version 1.15.

Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

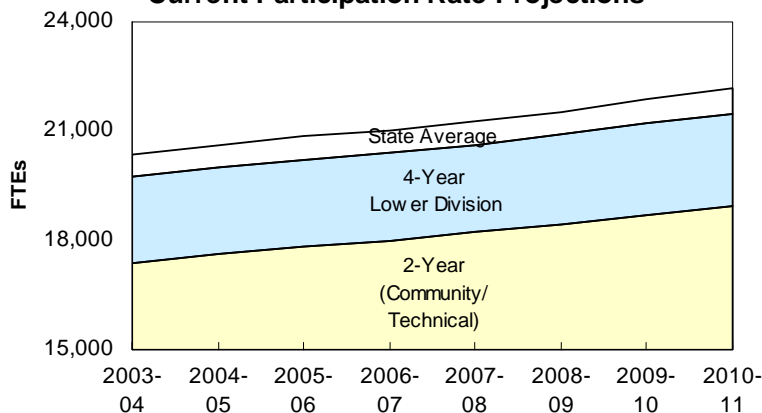
NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.

4-year data include undergraduate, graduate and professional enrollments.

Similar to the rest of Washington, the population of Pierce County is projected to continue its growth between now and 2010. If the same percentage of people elect to go to college, projected enrollments will increase with the population. Based on HECB projections, lower-division enrollments would grow from 19,736 in 2003-04 to 21,492 in 2010-11. However, if participation rates in the county increased, then additional enrollments would be anticipated. For instance, if Pierce County's participation rate matched the state average, enrollments would increase by 675 FTE, bringing total enrollments to 22,167 FTE in 2010 (see Figure 30).

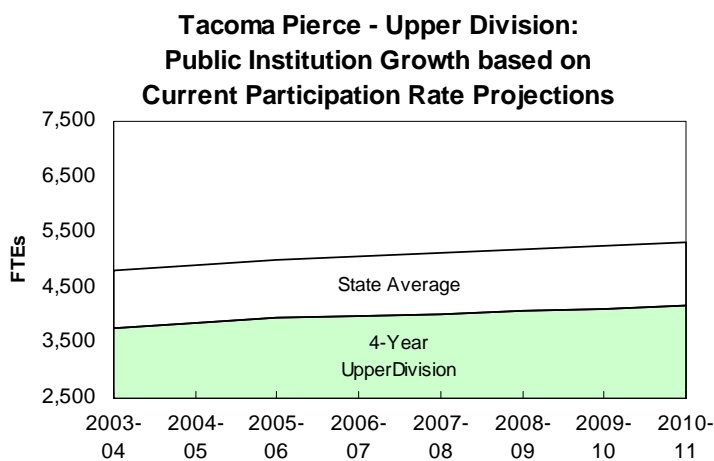
Figure 30

Tacoma Pierce - Lower Division:
Public Institution Growth based on
Current Participation Rate Projections



The same trend is expected for enrollments in the upper-division. Enrollments are projected to increase from 3,776 FTE in 2003-04 to 4,164 in 2010-11, if the same percentage of the population continues to choose to go to college. Unlike the lower-division, Pierce County is significantly below state average upper-division participation rates. Thus, if the rate were to increase to meet the average, an additional 1,115 enrollments are projected for 2010 (see Figure 31). It is of note that there is some disparity between the region's current participation rate and the state average. However, this analysis does not include data from private schools (ICW, private for-profit, etc.). Thus, the actual projections regarding participation rate may be higher than those included in this report.


Figure 31



Regional Workforce Supply


Health care and social assistance occupations have historically provided the largest number of jobs and highest wages in the county and this trend is projected to continue. Despite the prevalence of this industry, analysts have predicted critical shortage areas (especially for nursing and other medical technicians), many of which will require middle-level and long preparation (see Tables 18 and 19). In total, 380,000 jobs will be created for health care personnel, finance personnel, paralegals, educators, and sales people in Pierce County in the next decade. Again, growth in these positions will most likely require some postsecondary training.

Table 18
Key Occupations Requiring Middle-Level Preparation

	Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)		
	Occupational Titles	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003 Estimated Mean Wage 2003
Registered Nurses	185	0.8%	\$57,170
Carpenters	122	13.0%	\$40,690
Supervisors/Managers of Office and Administrative Support Workers	110	2.3%	\$45,300
Supervisors/Managers of Retail Sales Workers	105	2.9%	\$41,270
Cooks, Restaurant	103	4.3%	\$22,050
Maintenance and Repair Workers, General	80	1.9%	\$36,130
Licensed Practical and Licensed Vocational Nurses	79	1.9%	\$35,660
Supervisors/Managers of Food Preparation and Serving Workers	65	1.8%	\$31,970
Supervisors/Managers of Construction Trades and Extraction Workers	56	3.3%	\$61,940
Gaming Dealers	51	3.3%	\$14,910
Plumbers, Pipefitters, and Steamfitters	51	9.9%	\$47,210
Automotive Service Technicians and Mechanics	49	10.1%	\$36,600
Cooks, Institution and Cafeteria	45	5.8%	\$24,430
Medical Secretaries	45	1.6%	\$32,450
Fire Fighters	42	1.0%	\$53,750

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Table 19
Key Occupations Requiring Long Preparation

	Long Preparation (Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)		
	Occupational Titles	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003 Estimated Mean Wage 2003
Elementary School Teachers, Except Special Education	141	0.3%	\$44,630
Secondary School Teachers, Except Special and Voc. Education	93	0.0%	\$45,730
Teachers, Primary, Secondary, and Adult, All Other	85	*N/A	\$31,290
General and Operations Managers	71	1.9%	\$111,770
Middle School Teachers, Except Special and Voc. Education	65	0.8%	\$43,790
Accountants and Auditors	58	5.9%	\$61,260
Rehabilitation Counselors	53	0.4%	\$30,940
Counselors, Social, and Religious Workers, All Other	45	*N/A	\$38,010
Construction Managers	29	6.6%	\$101,390
Lawyers	28	1.1%	\$74,920
Insurance Sales Agents	26	2.9%	\$49,230
Multi-Media Artists and Animators	25	*N/A	*N/A
Mental Health and Substance Abuse Social Workers	24	0.6%	\$46,060
Financial Managers	23	8.9%	\$78,150
Educational, Vocational, and School Counselors	22	3.7%	\$45,510

* - Mean Annual Wages are unavailable for occupation

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Regional Community Demand

Pierce County is the second largest county in the state containing one-tenth of the population, labor force, and job-base. Growth in the labor force is projected to continue over the next decade and shifts in industrial patterns will accompany this growth. Like other areas of the state, Pierce County will continue to experience a shift away from manufacturing to the service industry. The area has experienced layoffs in the aerospace and technology sectors, though the presence of government institutions like the Port of Tacoma, McChord Airforce Base, and Fort Lewis have stabilized the regional economy. Local planners and stakeholders are focusing strategic planning efforts on attracting high-technology firms, providing training for incumbent workers, and increasing access to job training for youth, low-income individuals, and individuals with limited English proficiency so that the region can meet the increased demand for highly-skilled workers.

Southwest Regional Needs Assessment

Regional Student Demand

The Southwest region includes the four counties of Clark, Skamania, Cowiltz, and Wahkiakum. The total population for the region is 501,600, though roughly 78 percent of the population resides in Clark County (part of the Portland, Oregon metropolitan statistical area (MSA)). The region has four colleges/universities, including a public research university branch campus, two public community colleges and a private institution, providing a combined 10,435 FTE enrollment (see Table 20). In addition, there are three four-year colleges and one two-year institution located just across the state border in Portland. They include Portland State University, the Oregon Institute of Technology's metro campus, Oregon Health and Science University, and Portland Community College.

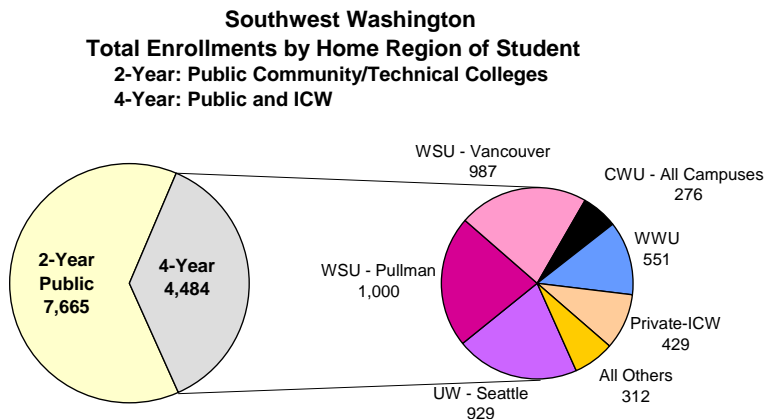
Table 20
Colleges or Universities Located in the Southwest Region

Institution Sector	Name	Location	Size (FTE)
Public Four-Year	Washington State University - Vancouver	Vancouver	1,257
Private Non-Profit Four-Year	Golden Gate Baptist Theological Seminary - Northwest	Vancouver	60
Public Two-Year	Clark College	Vancouver	6,639
Public Two-Year	Lower Columbia College	Longview	2,479
Region Total			10,435

Source: Integrated Postsecondary Education Data System, Peer Analysis System.

One of the most prevalent higher education issues facing the region, as identified by regional planners, is that it is below the state average in the number of residents currently enrolled in college. Regional stakeholders have developed strategic plans to target youth and education to encourage enrollment in college to meet the needs of employers in the region. In the 2004-05 school year, the Southwest region was home to 12,149 students enrolled in college, 37 percent of whom attended a four-year institution. Roughly 60 percent of these students are equally divided among the campuses of WSU (Pullman and Vancouver) and the UW (see Figure 32).

Figure 32



Source: Public: Higher Education Simulation Model, Version 1.15.

Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.

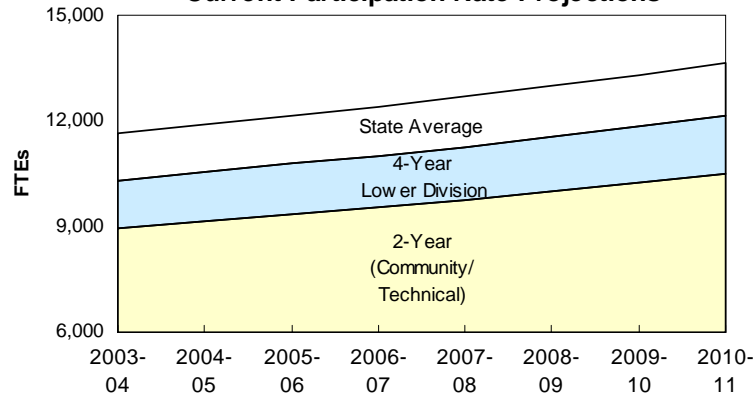
4-year data include undergraduate, graduate and professional enrollments.

As mentioned earlier, student demand in the region falls below the Washington state average as well as that in the Portland statistical area. Roughly 3.6 percent of the total population is currently enrolled in college, though 12.2 percent of 17-19 year olds and 17.3 percent of 20-24 year olds are enrolled in higher education in the state.²⁰ But despite below average participation rates, the region is increasing in total population and will need to expand lower-division enrollments from 10,316 FTE in 2003-04 to 12,128 FTE in 2010 to maintain the current level of service. If participation rates in the region were to increase (using the state average as an example), then total enrollments would need to increase to 13,645 FTE in 2010-11 to meet student demand (see Figure 33).

²⁰ Estimates from the Southwest Washington Workforce Development Council (SWWDC) indicate that approximately 21 percent of residents between the ages of 18-25 are currently enrolled in college. The difference between HECB analysis and that of the SWWDC are likely due to the large out-of-state enrollments at Oregon colleges that are not captured in the HECB analysis.

Figure 33

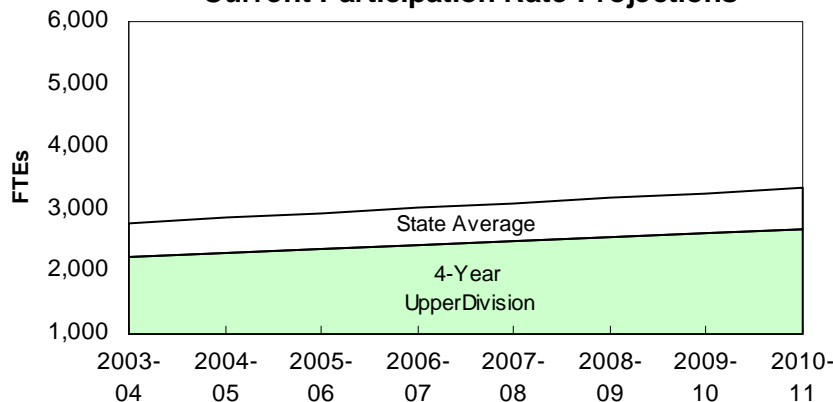
**Southwest Washington - Lower Division:
Public Institution Growth based on
Current Participation Rate Projections**



Enrollment increases of roughly 17 percent can also be expected for upper-division students between 2003-04 and 2010-11. If participation rates remain the same, enrollments will expand from 2,230 to 2,684 during that time period. However, if rates grow to meet state averages, enrollments would increase to 3,342 in 2010-11 (see Figure 34). It is of note that projected lower- and upper-division increases, based both on population increases and increases in the regional participation rate, would require a 35 percent expansion in enrollments over current levels. This percentage of growth is the highest in the state.

Figure 34

**Southwest Washington - Upper Division:
Public Institution Growth based on
Current Participation Rate Projections**



Regional Workforce Demands


Between 2002 and 2012, the counties of the Southwest region are expected to have approximately 13,660 job openings in middle-level and long preparation occupations. Despite having above average labor force participation rates, the per capita income for the region is below the state average, which suggests that many of the jobs in the region are in lower preparation, lower paying fields such as manufacturing, service, and retail. However, occupations in health care, construction, finance and insurance, and education are growing most quickly, many of which require baccalaureate education. This trend is reflected in Tables 21 and 22 which list high demand for registered nurses (training needs could be met with either a two-year or four-year degree), teachers, various types of managers, and accountants/auditors.

Table 21
Key Occupations Requiring Middle-Level Preparation

Occupational Titles	 Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)		
	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Registered Nurses	103	1.1%	\$55,170
Supervisors/Managers of Retail Sales Workers	95	2.1%	\$38,180
Carpenters	75	12.6%	\$39,060
Cooks, Restaurant	65	4.6%	\$20,130
Supervisors/Managers of Office and Administrative Support Workers	57	1.9%	\$43,190
Maintenance and Repair Workers, General	56	2.7%	\$33,150
Semiconductor Processors	54	12.9%	\$29,840
Electricians	54	16.1%	\$58,770
Supervisors/Managers of Construction Trades and Extraction Workers	39	2.1%	\$61,400
Automotive Service Technicians and Mechanics	38	8.1%	\$36,850
Supervisors/Managers of Food Preparation and Serving Workers	37	1.7%	\$28,230
Supervisors/Managers of Production and Operating Workers	36	4.2%	\$50,080
Plumbers, Pipefitters, and Steamfitters	33	22.2%	\$55,800
Welders, Cutters, Solderers, and Brazers	30	19.0%	\$34,690
Barbers	27	0.2%	\$21,840

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Table 22
Key Occupations Requiring Long Preparation

	Long Preparation (Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)		
	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Occupational Titles			
Elementary School Teachers, Except Special Education	108	0.5%	\$44,720
Secondary School Teachers, Except Special and Voc. Education	65	*N/A	\$45,820
Teachers, Primary, Secondary, and Adult, All Other	64	*N/A	\$32,150
General and Operations Managers	54	1.1%	\$97,400
Middle School Teachers, Except Special and Voc. Education	50	0.7%	\$43,720
Accountants and Auditors	34	5.9%	\$55,630
Rehabilitation Counselors	29	0.2%	\$27,370
Construction Managers	28	3.6%	\$75,220
Dentists	25	*N/A	\$177,690
Civil Engineers	18	1.2%	\$62,630
Insurance Sales Agents	18	2.3%	\$60,790
Writers and Authors	17	0.8%	\$49,040
Education Administrators, Elementary and Secondary School	17	*N/A	\$79,490
Lawyers	17	0.7%	\$86,970
Loan Officers	17	2.7%	\$57,270
* - Mean Annual Wages are unavailable for occupation			

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Community Demand

Strategic regional planning by local stakeholders is divided into two sub-areas (Wahkiakum and Cowlitz Counties and Clark and Skamania Counties) and employs a compilation of information sources to assess the need for a highly qualified workforce. Compared to Washington and the Portland region, workers in Southwest Washington are more likely to be in construction, production, or service jobs and less likely to be in professional, technical, management, or sales positions. Thus, regional planners are actively focused on providing workforce preparation education.

However, it is also of note that the Southwest region is actually a net exporter of jobs, meaning that there are more people than there are job openings. Many residents commute outside their region for employment or higher paying positions. Local planners are therefore working to enhance the region's competitiveness by increasing collaborative efforts with baccalaureate institutions, community colleges, technical schools, and local employers to identify key industrial clusters and gear educational efforts toward meeting employer demands in an effort to retain highly qualified workers. Target clusters like health care, professional and technical, as well as finance and insurance already have a significant presence in the region, often require college preparation and offer high-paying wages.

North Central Regional Needs Assessment

Regional Student Demand

The North Central region includes the counties of Okanogan, Chelan, Douglas, Grant, and Adams. The total population of the region based on 2003 U.S. Census estimates is 236,153. The region has two colleges, both public community colleges, that serve 4,122 full-time equivalent students (see Table 23).

Table 23
Colleges or Universities Located in the North Central Region

Institution Sector	Name	Location	Size (FTE)
Public Two-Year	Big Bend Community College	Moses Lake	1,649
Public Two-Year	Wenatchee Valley College	Wenatchee	2,472
Region Total			4,122

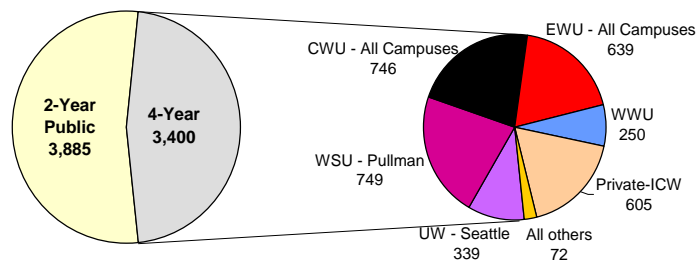
Source: Integrated Postsecondary Education Data System, Peer Analysis System.

Student Preference

The region is home to 7,285 students who currently attend college, slightly under half of whom attend a four-year institution. Roughly 63 percent of these students are equally divided among Washington State University, Central Washington University, and Eastern Washington University (see Figure 35).

Figure 35

North Central Washington
Total Enrollments by Home Region of Student
2-Year: Public Community/Technical Colleges
4-Year: Public and ICW



Source: Public: Higher Education Simulation Model, Version 1.15.

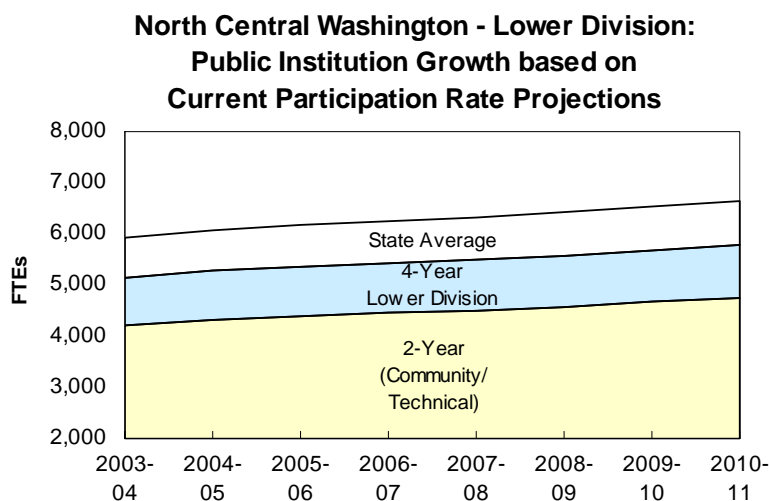
Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

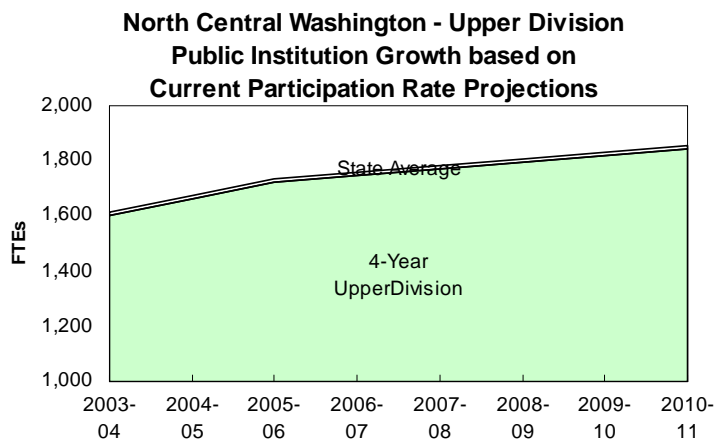
NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.

4-year data include undergraduate, graduate and professional enrollments.

Student demand for higher education in the region is slightly below the state average for younger students (17-24 year olds). However, the region has experienced population growth over the past decade and that trend is expected to continue. Despite lower than average participation for traditional-age college students, enrollment capacity must be increased from 5,161 FTE in 2003-04 to 5,777 FTE in 2010-11 for the lower-division, if the same percentage of students from the region continue to attend college (see Figure 36). If the percentage of student attending college increased to the state average, especially enrollments for the 17-19 year old age group, then enrollment capacity would need to expand to accommodate 6,642 FTE.

Figure 36


Enrollment increases of roughly 13 percent can also be expected for upper-division students between 2003-04 and 2010-11 based on population increases. If participation rates remain the same, enrollments will expand from 1,605 FTE to 1,842 FTE in 2010-11. Unlike lower-division, the region's participation rates for the upper-division are only slightly below the state average, making FTE increases to match the average negligible (see Figure 37).

Figure 37

Regional Workforce Demand

Between 2002 and 2012, the counties of the North Central region are expected to have steady growth in annual job openings in middle-level and long preparation occupations. Like many other regions in Washington, demand for registered nurses, who can be trained either in two-year or four-year settings, continues to grow. Growth in the retail and service industries is also reflected in the middle-level preparation group, with openings for cooks and retail managers/workers on the rise. Increasing demand in the government sector, especially in educationally-related fields, is demonstrated in the number of openings for elementary, middle school, and secondary teachers (see Tables 24 and 25).

Table 24
Key Occupations Requiring Middle-Level Preparation

Occupational Titles	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
 Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)			
Registered Nurses	78	0.9%	\$49,140
Graders and Sorters, Agricultural Products	72	16.0%	\$16,970
Cooks, Restaurant	37	6.9%	\$20,060
Supervisors/Managers of Retail Sales Workers	36	3.1%	\$38,210
Carpenters	33	20.6%	\$41,140
Maintenance and Repair Workers, General	30	1.6%	\$32,510
Supervisors/Managers of Office and Administrative Support Workers	26	1.2%	\$41,660
Supervisors/Managers of Farming, Fishing, and Forestry Workers	24	4.4%	\$40,340
Electricians	24	11.6%	\$49,320
Supervisors/Managers of Construction Trades and Extraction Workers	23	1.7%	\$49,140
Supervisors/Managers of Food Preparation and Serving Workers	20	1.2%	\$29,120
Cooks, Institution and Cafeteria	20	7.2%	\$22,280
Licensed Practical and Licensed Vocational Nurses	20	0.6%	\$32,350
Automotive Service Technicians and Mechanics	19	8.0%	\$31,020
Farm Equipment Mechanics	17	2.1%	\$30,030

** - The percentage of people in the occupation that sought unemployment insurance benefits

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Table 25
Key Occupations Requiring Long Preparation

Long Preparation

(Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)

Occupational Titles

	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Elementary School Teachers, Except Special Education	46	0.4%	\$43,550
Accountants and Auditors	37	2.3%	\$53,730
Teachers, Primary, Secondary, and Adult, All Other	37	*N/A	\$28,820
Secondary School Teachers, Except Special and Voc. Education	33	*N/A	\$44,060
Middle School Teachers, Except Special and Voc. Education	26	0.7%	\$43,330
General and Operations Managers	21	1.4%	\$92,820
Recreation Workers	13	1.9%	\$21,420
Construction Managers	12	6.6%	\$63,850
Medical and Clinical Laboratory Technologists	11	0.7%	*N/A
Preschool Teachers, Except Special Education	10	9.0%	\$23,600
Educational, Vocational, and School Counselors	10	2.7%	\$46,160
Insurance Sales Agents	9	2.5%	\$44,980
Education Administrators, Elementary and Secondary School	9	*N/A	\$76,460
Lawyers	9	0.4%	\$83,750
Rehabilitation Counselors	8	0.9%	\$25,440

* - Mean Annual Wages are unavailable for occupation

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Regional Community Demand

The North Central region is in many ways recovering from several years of difficult economic times. Given the cyclical nature of the agricultural economic base, local planners are intent on diversifying the business environment to help prevent extended periods of economic downturn. Part of this strategy is ensuring that local employers are readily able to access qualified workers by closing skill gaps in the incumbent population. Thus, regional higher education priorities include increasing postsecondary education and training capacity by strengthening partnerships with business and government. Though nearly one-third of the workforce will remain in agriculture, significant growth is forecasted in “white collar” occupations that are predicted to outpace “blue collar” growth and will require more education. These fields include government and education (as reflected in the tables above), health care, and technical services. The population in the region is also aging, as younger working-age adults move to different areas of the state for employment opportunities and older adults in retirement or semi-retirement return to the area for its rural geography and decreased cost of living. This demographic shift also impacts job growth in sectors outside agriculture (construction, medical and government services, and retail) and has higher education implications, either at the two-year or four-year level.

Tri-County Regional Needs Assessment

Regional Student Demand

The Tri-County region consists of the three counties of Kittitas, Yakima, and Klickitat and has a population of 281,480, nearly 81 percent of which resides in Yakima County. The region has four colleges; one public four-year, one private four-year, one public two-year, and one technical institution. The four institutions provide a combined 14,631 full-time equivalent (FTE) enrollments (see Table 26).

Table 26
Colleges or Universities Located in the Tri-County Region

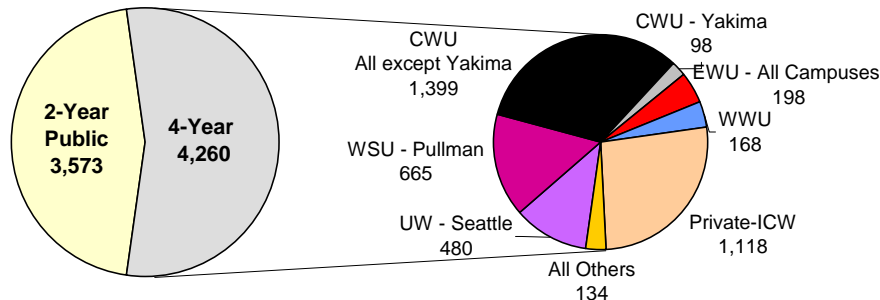
Institution Sector	Name	Location	Size (FTE)
Public Four-Year	Central Washington University	Ellensburg	8,657
Private Non-Profit Four-Year	Heritage University	Toppenish	984
Public Two-Year	Yakima Valley Community College	Yakima	3,846
Other	Perry Technical Institute	Yakima	1,143
Region Total			14,631

Source: Integrated Postsecondary Education Data System, Peer Analysis System.

Student Preference

The Tri-County region is home to 7,833 students who are currently enrolled in college, 54 percent of whom attend a four-year institution. The Tri-County and Eastern regions are the only two in the state that have more students attending four-year colleges than two-year. Of the 54 percent who attend four-year colleges, roughly 34 percent attend nearby Central Washington University, while 26 percent attend a variety of private institutions including Heritage University. The state's two public research institutions, Washington State University and the University of Washington, draw 15 percent and 11 percent, respectively (see Figure 38).

Figure 38
Tri-County
Total Enrollments by Home Region of Student
2-Year: Public Community/Technical Colleges
4-Year: Public and ICW



Source: Public: Higher Education Simulation Model, Version 1.15.

Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.

4-year data include undergraduate, graduate and professional enrollments.

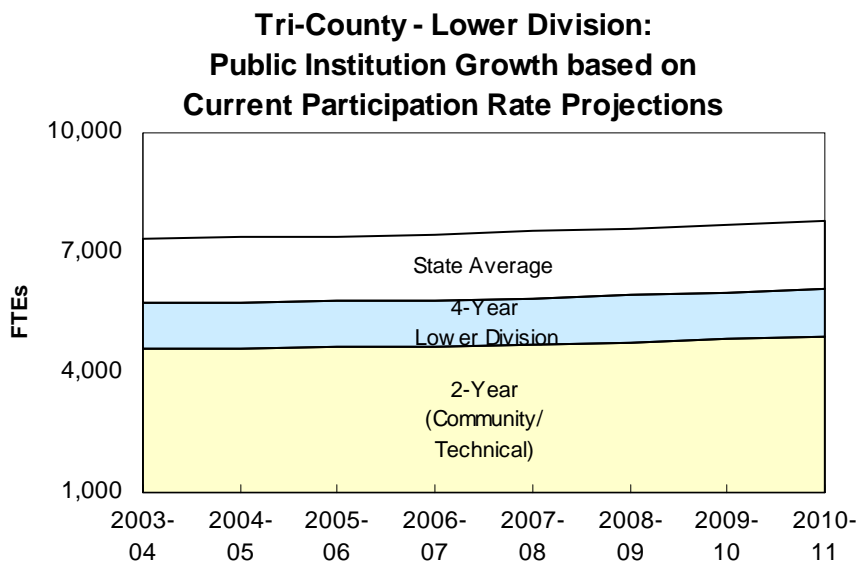
According to the regional Workforce Development Council's updated strategic plan, a key issue facing the region is increasing access to colleges and universities. The Tri-County region has the highest high school dropout rate of any region in the state and keeping students engaged in high school so that they may make the transition to higher education is a priority for local education and workforce development planners. The region is experiencing demographic shifts as increased numbers of Hispanic residents move to the region. Yakima County has the highest proportion of Hispanic residents, with the greatest percent increase between 1990 and 1999. According to data from the Office of the Superintendent for Public Instruction, Hispanic students fare worse than their Caucasian counterparts regarding issues of English proficiency and high school completion. Further, census data indicate that a higher proportion of Hispanics live at or below the poverty line when compared with Caucasians. Workforce development staff indicate that these factors are certainly barriers to getting livable-wage jobs and are therefore actively working to increase economic and educational parity for all citizens in the region. The authors of the region's workforce development strategic plan may have summed up these issues best when they state, "Today's challenges that are being faced in the educational system have a direct impact on the quality and strength of the future workforce development system."²¹

Based on HECB projections, the Tri-County region is expected to gain approximately 16,647 people in the next seven years. If the same percentage of that population continues to choose to attend college, there will be an increase in student demand and enrollments. In 2003-2004, roughly 5,757 FTE lower-division students enrolled in college from the region. That number

²¹ Quote taken from the Tri-County Workforce Development Council's 2005-2007 Strategic Plan, p. 3.

would increase to 6,090 FTE in 2010-11. However, if a greater percentage of the population elected to go to a college or university, an even larger increase in enrollments is anticipated. For instance, if the regional participation rate matched the state average, lower-division enrollments would increase to 7,803 FTE in 2010-11 (see Figure 39).

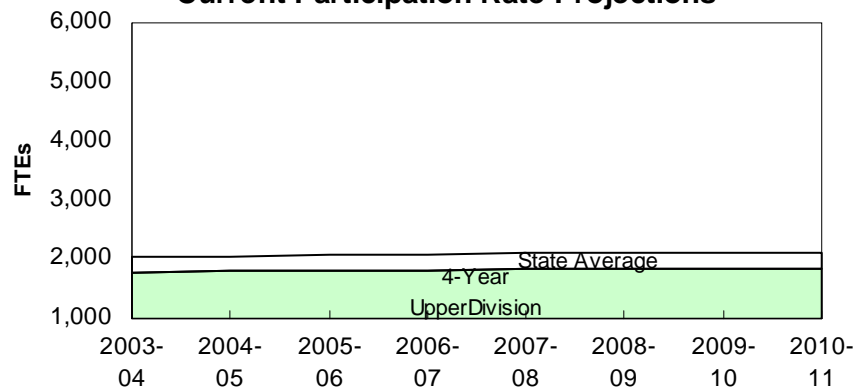
Figure 39



The same trend is anticipated at the upper-division. Enrollments are projected to increase from 1,775 FTE in 2003-04 to 1,854 FTE in 2010-11, based on population growth. If the regional participation rate increased to match the state average, an additional 272 enrollments are anticipated; bringing the 2010 enrollment total to 2,126 FTE (see Figure 40). It is of note that there is a fairly large disparity between the region's current participation rate and the state average. However, this analysis does not include data from private ICW schools. Thus, the actual projections regarding participation rate may be higher than those included in this report.

Figure 40

**Tri-County - Upper Division:
Public Institution Growth based on
Current Participation Rate Projections**



Regional Workforce Demand

The key occupational growth in the region is projected in the government, health care, and agribusiness sectors, most of which could require some college-level training. The key occupations in the middle-level preparation category focus on health care and service industries (see Table 27). The long preparation category is heavily concentrated in government, particularly education with 47 percent of the total key occupations grouped in this category and 40 percent in social service (see Table 28).

Table 27
Key Occupations Requiring Middle-Level Preparation

	Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Occupational Titles				
Registered Nurses		78	0.6%	\$51,320
Graders and Sorters, Agricultural Products		74	25.9%	\$18,120
Carpenters		48	16.4%	\$37,190
Supervisors/Managers of Retail Sales Workers		47	2.4%	\$39,250
Maintenance and Repair Workers, General		41	1.5%	\$30,690
Cooks, Institution and Cafeteria		32	5.4%	\$23,080
Supervisors/Managers of Office and Administrative Support Workers		32	1.4%	\$43,240
Computer Support Specialists		26	4.2%	\$32,140
Cooks, Restaurant		24	9.4%	\$19,380
Supervisors/Managers of Food Preparation and Serving Workers		24	1.1%	\$31,190
Gaming Dealers		23	2.6%	*N/A
Licensed Practical and Licensed Vocational Nurses		22	1.1%	\$32,410
Automotive Service Technicians and Mechanics		21	8.1%	\$29,160
Police and Sheriff's Patrol Officers		20	1.6%	\$47,850
Supervisors/Managers of Farming, Fishing, and Forestry Workers		20	3.8%	\$36,270

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005.
 Available at www.workforceexplorer.com.

Table 28
Key Occupations Requiring Long Preparation

Long Preparation

(Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)

Occupational Titles

	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Elementary School Teachers, Except Special Education	61	0.1%	\$41,500
Teachers, Primary, Secondary, and Adult, All Other	39	*N/A	\$33,820
Secondary School Teachers, Except Special and Voc. Ed.	39	*N/A	\$43,610
General and Operations Managers	31	0.8%	\$100,140
Rehabilitation Counselors	31	0.7%	\$29,580
Middle School Teachers, Except Special and Vocational Education	29	1.8%	\$42,210
Accountants and Auditors	22	3.3%	\$67,590
Computer Programmers	21	2.7%	\$49,710
Educational, Vocational, and School Counselors	14	2.0%	\$46,750
Education Administrators, Elementary and Secondary School	12	*N/A	\$78,600
Recreation Workers	11	1.2%	\$24,170
Mental Health and Substance Abuse Social Workers	11	1.4%	\$43,680
Child, Family, and School Social Workers	11	5.3%	\$30,300
Preschool Teachers, Except Special Education	10	14.2%	\$22,550
Mental Health Counselors	10	0.1%	\$32,630

* - Mean Annual Wages are unavailable for occupation

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Regional Community Demand

The Tri-County region continues to rely on the agribusiness-related industry for roughly 48 percent of employment in the region. However, the seasonal nature of agriculture work factors into the region's lower than average wages and salaries. Thus, regional stakeholders have actively engaged in partnerships with local business, education, and labor to develop plans to address the region's current and future workforce needs and create livable wage jobs. Key among the drivers for future economic development in the region are agriculture/food processing, manufacturing (petroleum, coal, and agricultural products), health care, and construction. Many occupations in each of these industries will require some postsecondary training, both in terms of new workers entering the workforce and training for incumbent and dislocated employees who are being encouraged to stay.

Eastern Washington Regional Needs Assessment

Regional Student Demand

The Eastern region includes nine counties on the eastern border of the state: Ferry, Stevens, Pend Oreille, Lincoln, Whitman, Walla Walla, Columbia, Garfield, and Asotin. The region is largely rural and contains a sparsely dispersed population of approximately 195,700 (2000 U.S. Census) and four colleges or universities. One of the state's two public research institutions, Washington State University, is located in Pullman and provides 72 percent of the region's 23,815 full-time equivalent enrollments (see Table 29).

Table 29
Colleges or Universities Located in the Eastern Region

Institution Sector	Name	Location	Size (FTE)
Public Four-Year	WSU-Pullman	Pullman	17,342
Private Non-Profit Four-Year	Walla Walla College	College Place	1,800
Private Non-Profit Four-Year	Whitman College	Walla Walla	1,512
Public Two-Year	Walla Walla Community College	Walla Walla	3,161
Region Total			23,815

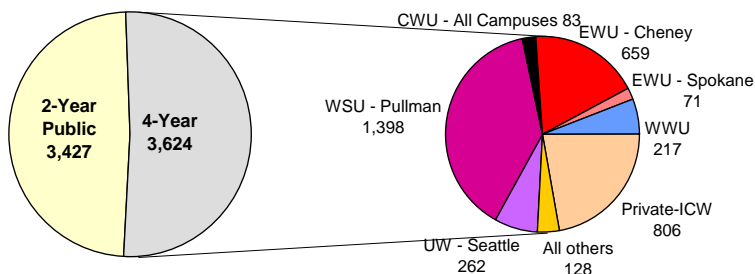
Source: Integrated Postsecondary Education Data System, Peer Analysis System.

Student Preference

The Eastern region is home to 7,051 students currently attending college, over half of whom attend a four-year institution.²² The Eastern and Tri-County regions are the only two in the state with over half of their postsecondary enrollments at four-year institutions. Nearly 60 percent of students who attend a four-year college do so in the region (WSU) or in nearby Spokane County at Eastern Washington University (see Figure 41).

²² This figure does not include students who attend college out-of-state or are categorized as "unknown."

Figure 41
Eastern Washington
Total Enrollments by Home Region of Student
 2-Year: Public Community/Technical Colleges
 4-Year: Public and ICW

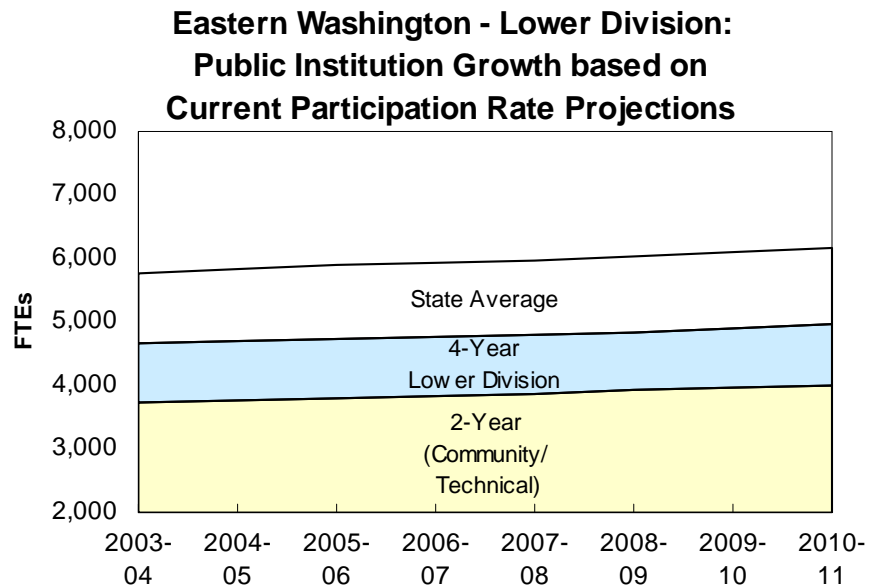


Source: Public: Higher Education Simulation Model, Version 1.15.
 Higher Education Coordinating Board, June 2005.
 ICW: survey of institutions.
 NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.
 4-year data include undergraduate, graduate and professional enrollments.

Roughly 4.5 percent of adults living in the Eastern region currently attend a college or university, which matches the state average. Within the total population, about 13 percent of 17-19 year olds and 14 percent of 20-24 year olds attend college. Both of these figures fall below average participation rates for the rest of the state.

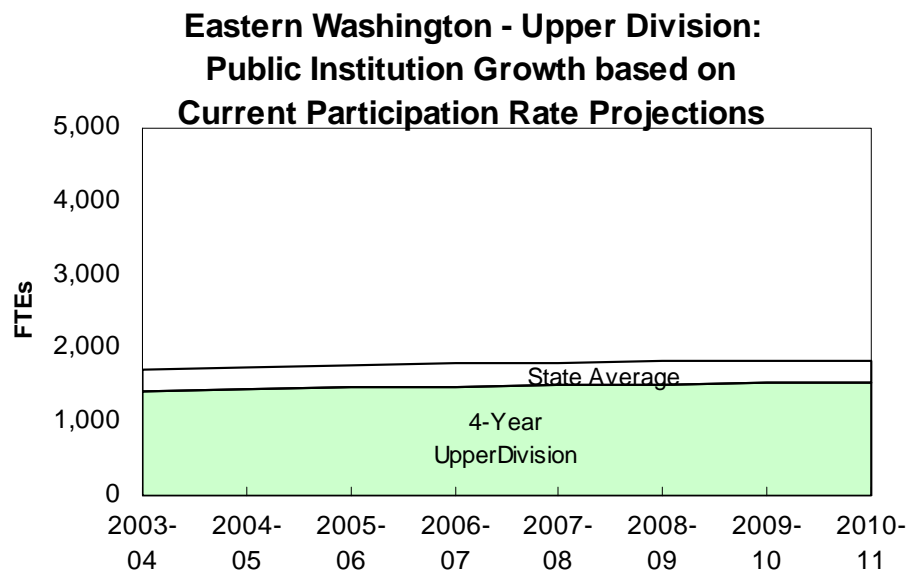
Despite lower than average enrollments for traditional-age college students, the region would still need to increase lower-division enrollments from 4,660 FTE in 2003-04 to 4,963 FTE in 2010-11 to accommodate anticipated increases in the population and maintain current levels of service (see Figure 42). Upper-division enrollments would need to increase from 1,421 in 2003-04 to 1,538 in 2010-11 (see Figure 43). Neither of these estimates account for any increase in the percentage of the population who decide to attend college. For instance, if participation rates for lower-division enrollment in the region were to increase to the state average, enrollments in 2010-11 would increase to 6,169 FTE in the lower-division alone.

Figure 42



Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

Figure 43




Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

Regional Workforce Needs

A key higher education issue facing the region is how to create a supply of workers for occupations in the large agricultural and service industries, which require little higher education training, while at the same time producing and retaining highly skilled workers to fill positions in teaching, engineering, or health care related occupations. This is especially difficult for the latter group since wages in the region are typically lower than wages for similar positions in urban areas. Due to the sparse population distribution, easy access to colleges or universities is often difficult, especially for working adults.


Between 2002 and 2012, the Eastern region is expected to have approximately 604 annual job openings in middle-level and long preparation categories. The key occupations in the region requiring at least a BA (long preparation) cluster in education fields. Demand for registered nursing positions will also be high and could be met either by middle-level preparation or long preparation. Anticipated openings for nurses are more than double the number of openings for the second highest-demand occupation (see Tables 30 and 31).

Table 30
Key Occupations Requiring Middle-Level Preparation

	Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)		
	Occupational Titles	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003
			Estimated Mean Wage 2003
	Registered Nurses	70	1.8%
	Supervisors/Managers of Retail Sales Workers	30	1.3%
	Maintenance and Repair Workers, General	29	1.2%
	Carpenters	25	1.4%
	Cooks, Institution and Cafeteria	24	1.5%
	Supervisors/Managers of Office and Administrative Support Workers	22	1.4%
	Biological Technicians	18	1.7%
	Graders and Sorters, Agricultural Products	18	2.0%
	Fire Fighters	17	1.1%
	Supervisors of Food Preparation and Serving Workers	17	1.6%
	Supervisors of Construction Trades and Extraction Workers	16	1.4%
	Cooks, Restaurant	15	1.5%
	Licensed Practical and Licensed Vocational Nurses	14	1.5%
	Electricians	14	1.2%
	Automotive Service Technicians and Mechanics	13	1.5%

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Table 31
Key Occupations Requiring Long Preparation

	Long Preparation (Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)		
	Occupational Titles		
	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Elementary School Teachers, Except Special Education	36	1.9%	\$45,710
Secondary School Teachers, Except Special and Voc. Education	32	1.9%	\$45,430
Teachers, Primary, Secondary, and Adult, All Other	32	1.9%	\$25,870
Graduate Teaching Assistants	32	1.9%	*N/A
Business Teachers, Postsecondary	24	1.9%	*N/A
Middle School Teachers, Except Special and Voc. Education	20	1.9%	\$45,330
Recreation Workers	16	1.3%	\$33,370
Education Administrators, Postsecondary	15	1.9%	*N/A
Accountants and Auditors	15	1.3%	\$50,320
General and Operations Managers	15	1.1%	\$88,280
Educational, Vocational, and School Counselors	14	1.8%	\$44,210
Health Specialties Teachers, Postsecondary	13	1.9%	*N/A
Librarians	12	1.5%	\$45,810
Construction Managers	9	1.7%	\$63,130
Agricultural and Food Scientists	9	1.6%	*N/A
* - Mean Annual Wages are unavailable for occupation			

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Regional Community Needs

The nine counties of the Eastern region account for 21 percent of the total square mileage in Washington state and are sparsely populated, offering a “rural lifestyle” to their residents. Regional economic development efforts linked with education must be geared specifically to the region, as it contains a series of assets and challenges that differ from more densely populated regions like the Puget Sound. Planners in the region point out that “there is a significant difference between what is occurring on the I-5 corridor and the rural counties of the state.”²³ Employers in the region would like students to be encouraged to explore both workforce preparation and baccalaureate education in an effort to meet the demand for the numerous jobs in the service, agriculture, and natural resource based industries. However, the trend away from the

²³ Quotation is from the Eastern Washington Partnership Workforce Development Council’s Strategic Five-Year Plan.

latter two industries has created a greater demand for postsecondary education, especially as it relates to non-traditional, working students. Anticipated growth in health care related fields as well as government occupations like teaching and engineering will require advanced education. The counties are working together to provide or improve the communications systems in the region to provide high-speed internet to facilitate greater access to distance learning and job retraining.

Benton-Franklin Regional Assessment

Regional Student Demand

The Benton-Franklin region includes Benton and Franklin Counties in southeastern Washington. The population in the region is approximately 145,000 and the region includes two postsecondary institutions: a public two-year community college and a public research university branch campus which currently provide a combined 5,062 FTE enrollment (see Table 32).

Table 32
Colleges or Universities Located in the Benton-Franklin Region

Institution Sector	Name	Location	Size (FTE)
Public Four-Year	WSU-Tri-Cities (upper division only)	Richland	649
Public Two-Year	Columbia Basin College	Pasco	4,413
Region Total			5,062

Source: Integrated Postsecondary Education Data System, Peer Analysis System.

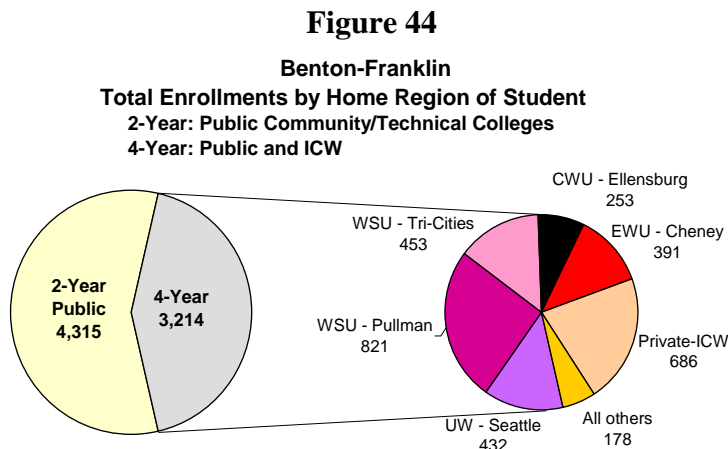
One of the key higher education issues in the region regards creating a four-year residential institution. With the exception of authorization for lower-division enrollments in the biotechnology program at WSU Tri-Cities, the region does not currently have a four-year college. Community leaders are currently “compiling a more compelling case” regarding Benton-Franklin’s higher education needs and are expected to bring that proposal to the HECB for further consideration later in 2005.²⁴

Student Preference

The Benton-Franklin region is home to 7,529 students currently attending college, roughly 43 percent of whom attend a four-year institution.²⁵ Students who call the region home and attend a four-year institution are quite mobile and attend public and private institutions across the state. Students most frequently attend Washington State University, with more than one-third of four-year enrollees attending either the Pullman or Tri-Cities campus (see Figure 44).

²⁴ The quote is taken from the “Background Information on Higher Education Issue” brief produced by the Tri-City Industrial Development Council.

²⁵ This figure does not include students who attend college out-of-state or are categorized as “unknown.”



Source: Public: Higher Education Simulation Model, Version 1.15.
Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

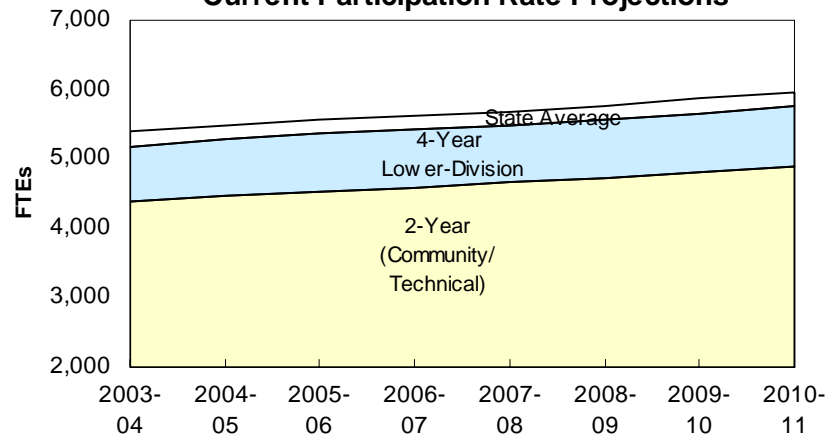
NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.
4-year data include undergraduate, graduate and professional enrollments.

Student demand estimates in the region based on historic participations rates indicate that roughly five percent of the total population in the region currently attends a college or university, slightly above the state average. However, the region falls below the state average among traditional college-age students (age 17-19) at 14 percent, compared with the state average of 17 percent.

Despite lower than average participation in the lower-division (based on current participation rates), the population in the region will continue to grow and impact higher education. HECB projections indicate that combined community and technical and four-year enrollments will need to expand from 5,184 FTE in 2003-04 to 5,755 FTE in 2010-11 to maintain the current level of participation. If a higher proportion of the population chooses to attend college, for instance to match the state average, an additional 200 FTE enrollments would be necessary (see Figure 45).

Figure 45

**Benton-Franklin - Lower Division:
Public Institution Growth based on
Current Participation Rate Projections**

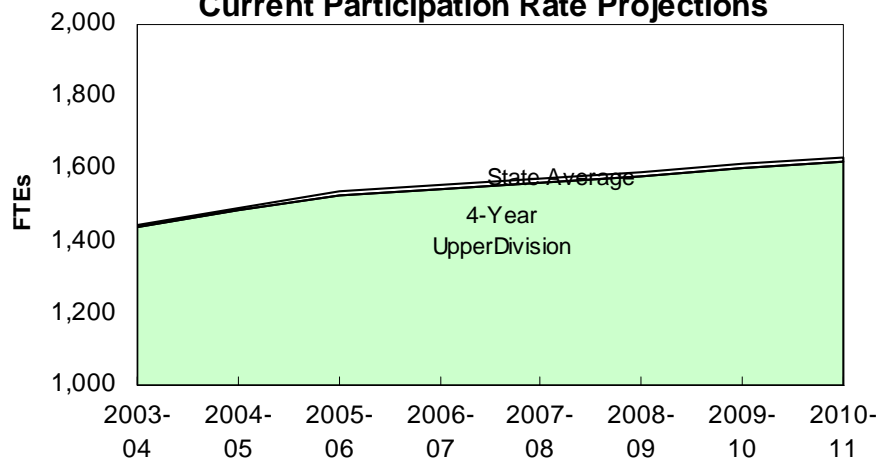


Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

Increases in anticipated enrollments are also projected for upper-division students. The region will need to accommodate an increase in upper-division enrollments of approximately 12 percent, from 1,436 FTE in 2003 to 1,618 FTE in 2011 to maintain the same service level. This increase matches the state average almost exactly with a difference of only 13 FTEs in 2011 (Figure 46).

Figure 46

**Benton-Franklin - Upper Division:
Public Institution Growth based on
Current Participation Rate Projections**




Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

Regional Workforce Needs


Between 2002 and 2012, Benton and Franklin Counties are expected to have approximately 828 annual job openings in middle-level and long preparation categories. The key occupations in the region requiring at least a BA cluster in education and engineering fields, while the mid-level preparation (one to four years of training) are scattered across various domains. Demand for nurses tops the list of mid-level preparation occupations, a trend that is echoed across Washington state. The occupations in key industries are summarized in Tables 33 and 34 below.

Table 33
Key Occupations Requiring Middle-Level Preparation

 Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Occupational Titles			
Registered Nurses	63	1.1%	\$54,310
Supervisors/Managers of Retail Sales Workers	44	2.0%	\$35,900
Graders and Sorters, Agricultural Products	37	9.0%	\$17,790
Supervisors/Managers of Office and Administrative Support Workers	34	0.8%	\$49,200
Maintenance and Repair Workers, General	33	2.1%	\$31,690
Carpenters	32	9.8%	\$45,300
Cooks, Restaurant	23	5.9%	\$20,180
Nuclear Technicians	23	2.4%	*N/A
Supervisors/Managers of Construction Trades and Extraction Workers	22	2.5%	\$55,920
Automotive Service Technicians and Mechanics	21	6.5%	\$33,630
Electricians	21	23.7%	\$50,720
Plumbers, Pipefitters, and Steamfitters	20	16.0%	\$50,320
Cooks, Institution and Cafeteria	17	3.7%	\$21,560
Supervisors/Managers of Food Preparation and Serving Workers	17	1.2%	\$32,440
Licensed Practical and Licensed Vocational Nurses	14	1.2%	\$33,540

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005.
Available at www.workforceexplorer.com.

Table 34
Key Occupations Requiring Long Preparation

	Long Preparation (Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)		
	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Occupational Titles			
Elementary School Teachers, Except Special Education	50	0.3%	\$44,690
Engineering Managers	38	1.5%	\$111,110
Mechanical Engineers	35	5.8%	\$84,860
Secondary School Teachers, Except Special and Vocational Education	32	*N/A	\$44,170
General and Operations Managers	30	0.9%	\$114,240
Electrical Engineers	29	2.3%	\$78,870
Industrial Engineers	26	2.2%	\$79,680
Middle School Teachers, Except Special and Vocational Education	25	0.4%	\$44,870
Teachers, Primary, Secondary, and Adult, All Other	23	*N/A	\$32,690
Civil Engineers	22	1.4%	\$69,070
Management Analysts	22	1.2%	\$85,400
Accountants and Auditors	22	3.7%	\$57,840
Environmental Scientists and Specialists, Including Health	21	*N/A	\$71,550
Chemical Engineers	17	3.8%	\$79,800
Cost Estimators	15	1.4%	\$56,930
* - Mean Annual Wages are unavailable for occupation			

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005.
 Available at www.workforceexplorer.com.

Regional Community Needs

The future demand for higher education varies depending on each region's specific industry patterns in relation to the community's efforts to direct its local economy. The Benton-Franklin region is home to a dense concentration of highly educated citizens, including those based at Hanford and the Department of Energy's Pacific Northwest National Laboratory (PNNL). Thus, local business leaders, educators, and economic development specialists are working to expand postsecondary capacity in the region. Specifically, development specialists are working to grow the high-technology skill base necessary to meet anticipated employer demands in years to come. This strategy is not only geared toward Hanford and PNNL, but also toward enhancing the leading private sector business in the region – agribusiness. Planners indicate that high technology training has applications in value-added processing (bi-engineering) and new crop development as well as in the ancillary manufacturing industries associated with agricultural business.

Spokane County Needs Assessment

Regional Student Demand

Spokane County spans 1,764 square miles on the state's eastern border and has a population of 431,027 (2003 U.S. Census estimate). The county has seven colleges or universities, including two public four-year schools (one is branch campus), two private four-year institutions, one for-profit college, and two community colleges (see Table 35). In combination, these schools provide 29,799 full-time equivalent (FTE) enrollments.²⁶

Table 35
Colleges or Universities Located in the Spokane County Region

Institution Sector	Name	Location	Size (FTE)
Public Four-Year	Eastern Washington University	Cheney/Spokane	8,603
Public Four-Year	Washington State University-Spokane	Spokane	597
Private Non-Profit Four-Year	Gonzaga University	Spokane	5,172
Private Non-Profit Four-Year	Whitworth College	Spokane	2,321
Private For-Profit	University of Phoenix-Spokane Campus	Spokane	Blank
Public Two-Year	Spokane Community College	Spokane	6,631
Public Two-Year	Spokane Falls Community College	Spokane	6,475
Region Total			29,799

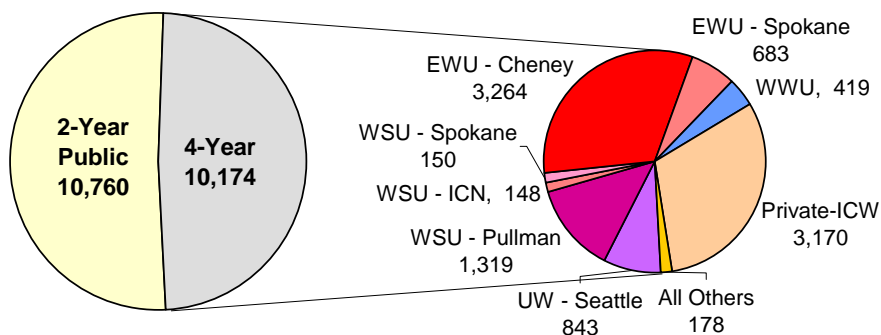
Source: Integrated Postsecondary Education Data System, Peer Analysis System.

Student Preference

Spokane County is home to 20,934 students who are currently enrolled in college, split almost equally between two-year and four-year institutions. Nearly 39 percent of students who attend four-year schools go to nearby Eastern Washington University located in Cheney/Spokane. EWU is followed in total enrollments by private, four-year institutions who garner 31 percent of students in the county. The combined campuses of Washington State University (Pullman, Spokane, and ICN) attract the third largest number of students, with 1,617 FTE or 16 percent of total four-year enrollments (see Figure 47).

²⁶ Enrollment statistics for the University of Phoenix are only available at the state level and cannot be broken out by region. Thus, the enrollment figure for Spokane County does not include students from this institution.

Figure 47
Spokane County
Total Enrollments by Home Region of Student
2-Year: Public Community/Technical Colleges
4-Year: Public and ICW



Source: Public: Higher Education Simulation Model, Version 1.15.

Higher Education Coordinating Board, June 2005.

ICW: survey of institutions.

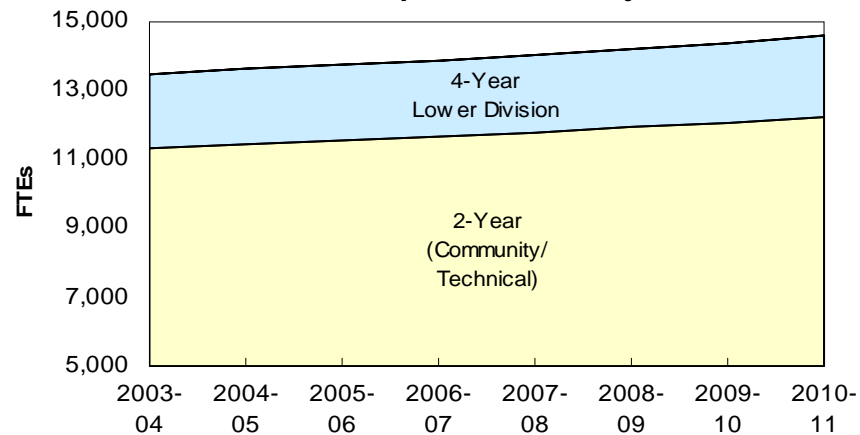
NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.

4-year data include undergraduate, graduate and professional enrollments.

Population growth is projected for Spokane County between now and 2010-11. If the same percentage of the population chooses to attend college as they do today, enrollments at higher education institutions will also increase. Accordingly, the state will need to increase capacity in future years to achieve the current level of service for Spokane County students. For instance, lower-division enrollments are projected to increase from 2003-04 levels of 13,501 FTE to 14,586 FTE in 2010-11 (see Figure 48). It also is noted that Spokane is the only region in the state that is currently exceeding the state average college participation rate. In most areas, additional capacity would be needed if the regional participation rate were to match the state average, the opposite is true of Spokane.

Figure 48

**Spokane - Lower Division:
Public Institution Growth based on
Current Participation Rate Projections**

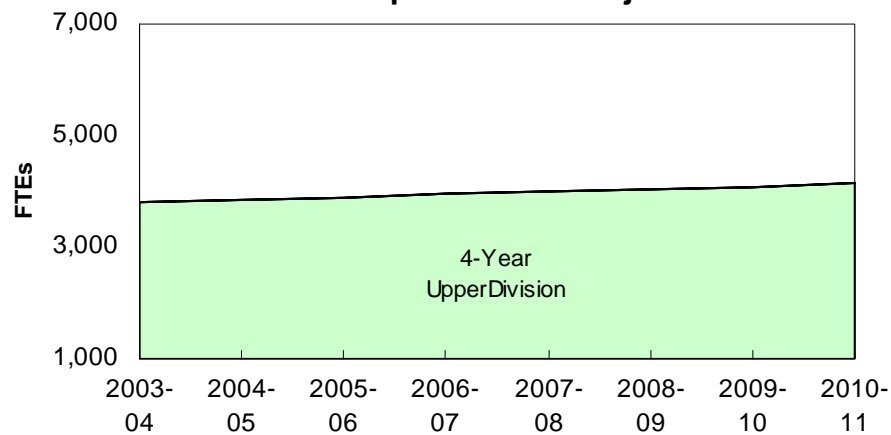


Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

Increases in upper-division enrollments are also expected based on population growth. Enrollments would increase from 3,805 FTE in 2003-04 to 4,140 FTE in 2010-11 (see Figure 49). Again, this estimate is based on the regional participation rate, which also exceeds the state's participation rate.

Figure 49

**Spokane - Upper Division:
Public Institution Growth based on
Current Participation Rate Projections**




Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

Regional Workforce Demand

State projections indicate that significant growth will take place in the health care, construction, and service industries. Many of the occupations in these categories will require middle-level preparation (see Table 36). State and federal governments, specifically K-12 school districts, continue to be the dominant employers in the region. As such, long preparation jobs are concentrated in educational arenas. Projected growth in engineering and computing industries will also create increased demand for long preparation occupations as reflected in Table 37.

Table 36
Key Occupations Requiring Middle-Level Preparation

	Middle-Level Preparation (One to four years of training on the job, through an employer or institutional instruction, or a combination, including apprenticeships, certificates, diplomas, or associate degrees.)		
	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Occupational Titles			
Registered Nurses	199	0.6%	\$49,310
Supervisors/Managers of Retail Sales Workers	93	1.7%	\$41,020
Supervisors/Managers of Office and Admin. Support Workers	75	1.8%	\$41,970
Carpenters	70	9.4%	\$38,240
Cooks, Restaurant	50	6.9%	\$19,490
Computer Support Specialists	50	7.7%	\$35,700
Maintenance and Repair Workers, General	48	2.2%	\$31,570
Cooks, Institution and Cafeteria	46	4.2%	\$22,270
Licensed Practical and Licensed Vocational Nurses	46	1.0%	\$35,890
Electricians	44	13.7%	\$42,770
Automotive Service Technicians and Mechanics	44	6.6%	\$35,330
Supervisors/Managers of Food Preparation and Serving Workers	41	2.1%	\$30,880
Supervisors/Managers of Non-Retail Sales Workers	37	1.2%	\$67,050
Supervisors of Construction Trades and Extraction Workers	35	1.9%	\$56,820
Claims Adjusters, Examiners, and Investigators	33	2.0%	\$42,130

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Table 37
Key Occupations Requiring Long Preparation

Long Preparation

(Four years or more of academic work, bachelor's degree or higher; may require additional work experience.)

Occupational Titles

	Average Annual Total Openings 2002-2012	Unemployment ** Insurance Ratio 2003	Estimated Mean Wage 2003
Elementary School Teachers, Except Special Education	93	0.3%	\$44,330
Teachers, Primary, Secondary, and Adult, All Other	66	*N/A	\$28,910
General and Operations Managers	65	1.1%	\$105,510
Secondary School Teachers, Except Special and Voc. Ed.	62	0.0%	\$44,320
Middle School Teachers, Except Special and Voc. Ed.	52	1.2%	\$43,610
Accountants and Auditors	47	3.0%	\$52,410
Counselors, Social, and Religious Workers, All Other	44	*N/A	\$40,590
Rehabilitation Counselors	42	0.2%	\$30,410
Lawyers	37	0.6%	\$72,370
Network Systems and Data Communications Analysts	31	1.1%	\$45,690
Insurance Sales Agents	30	4.5%	\$64,280
Construction Managers	29	4.8%	\$68,250
Computer Systems Analysts	29	2.6%	\$54,460
Family and General Practitioners	27	0.1%	\$113,080
Recreation Workers	27	1.0%	*N/A

* - Mean Annual Wages are unavailable for occupation

Source: Occupational Outlook published by the Employment Security Department, Labor Market and Economic Analysis Branch, 2005. Available at www.workforceexplorer.com.

Regional Community Demand

The Spokane area economy is unique in that, with the exception of government, the county does not have one dominant employer. Unlike Snohomish County that relies on The Boeing Company for a significant percentage of employment, nearly 57 percent of firms in Spokane County have one to four employees. Local stakeholders point out that diversity of small business is an asset for the region in that it provides a buffer and long-term resiliency from times of economic downturn (especially those that are industry-specific). Planners have therefore focused their workforce and economic development efforts on continued diversification through “small business cluster formation.” Local groups, working in partnership with business, labor, and education, have identified five primary areas for growth – health care services, construction, wholesale trade, metal fabrication/machine building, and business services. Within this context, stakeholders are focusing on recruiting and retaining firms that provide increased wages or “family wage” jobs. This strategy is especially relevant to incumbent workers displaced based on shifts in the regional economy (from extraction industry to technology based) and for young people who have historically left the county to pursue higher wage jobs elsewhere in the state.

Snohomish-Island-Skagit (SIS) Regional Needs Assessment

Regional Student Demand

The Snohomish/Island/Skagit (SIS) region has a population of 825,027 (2003 U.S. Census estimate). The area has seven colleges or universities, including three private non-profit schools, one for-profit college, and three community or technical colleges (see Table 38). It is of note that the only public four-year institution serving the region is Western Washington University located in Bellingham, a significant distance away from the region's population center of Everett. The Everett area is served by the Bothell campus of the University of Washington; however, this institution was just recently given the authority to add lower-division capacity, which will begin with a small group in fall 2006.

Table 38
Colleges or Universities Located in the SIS Region

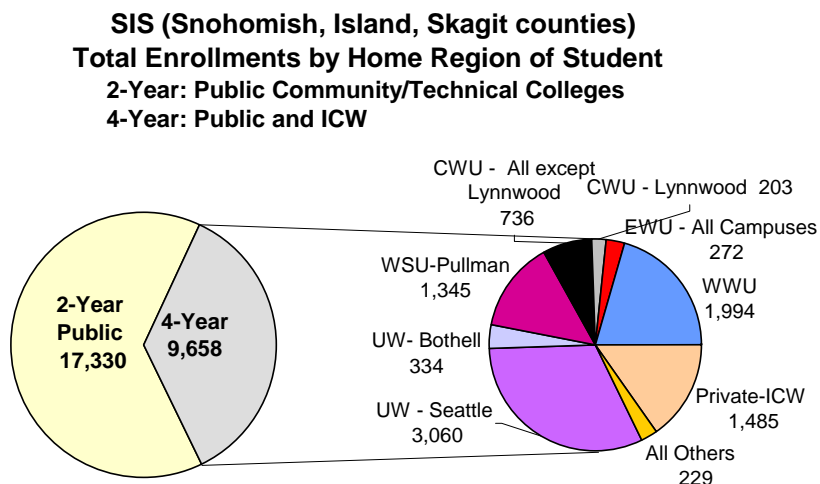
Type of Institution	Number in Region	Size (FTEs)
Private Non-Profit Four-Year	3	484
Private For-Profit	1	1,172
Public Two-Year	3	14,646
Region Total		16,302

Source: Integrated Postsecondary Education Data System, Peer Analysis System.

Student Preference

The SIS region is home to 26,988 students who attend college, 64 percent of whom go to a community or technical college. The remaining 36 percent of students enroll at four-year institutions and nearly one-third of those students attend the University of Washington's Seattle campus, with an additional 334 students at the UW's Bothell campus (three percent). Western Washington University draws the second largest proportion of students with 21 percent, while private four-year colleges and Washington State University draw roughly 13 percent of total four-year college students each (see Figure 50).

Figure 50



Source: Public: Higher Education Simulation Model, Version 1.15.
 Higher Education Coordinating Board, June 2005.

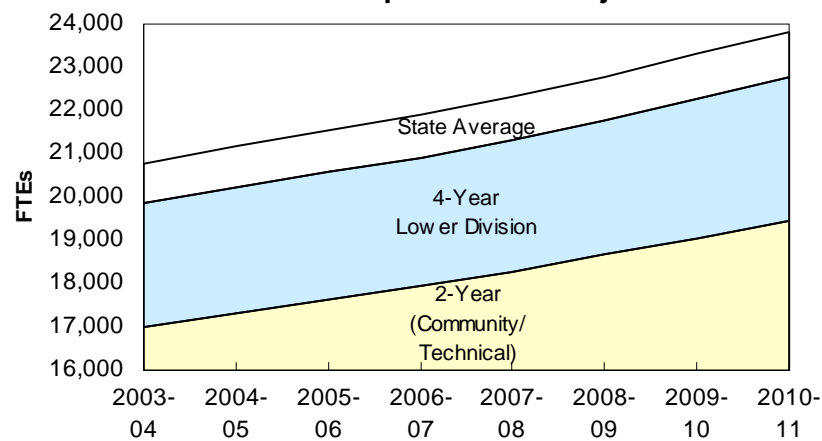
ICW: survey of institutions.

NOTE: Data reflect 2004-05 for public institutions; 2003-04 for ICW.
 4-year data include undergraduate, graduate and professional enrollments.

The population within SIS is projected to grow sharply over the next decade, outpacing growth in the rest of the state by 1.5 percent. If the same percentage of citizens in the region continues to enroll in college, then anticipated enrollments will grow as the population does. Based on HECB calculations, lower-division enrollments are projected to increase from 19,841 FTE in 2003-04 to 22,757 FTE in 2010-11. However, if a higher percentage of people choose to go to college, then enrollments would increase further. For instance, if the regional participation rate increased to match the state average, then an additional 1,053 FTE are projected in addition to those projected based on population increase (see Figure 51).

Figure 51

**SIS - Lower Division:
Public Institution Growth based on
Current Participation Rate Projections**

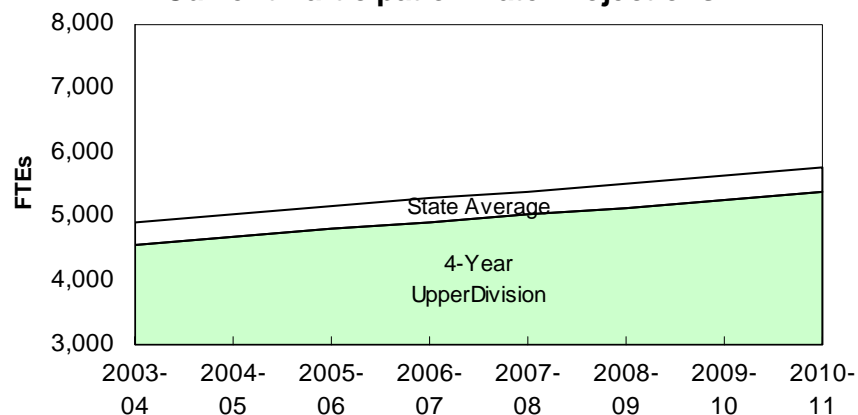


Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

The same trend is projected for upper-division students. Based on population growth, enrollment capacity would need to increase from 4,567 FTE in 2003-04 to 5,374 FTE in 2010-11 to maintain current levels of service for students from the SIS region. If a higher percentage of citizens opt for higher education, then enrollments would increase an additional 384 FTE by 2010-11, bringing the total to 5,758 FTE (see Figure 52).

Figure 52

**SIS - Upper Division:
Public Institution Growth based on
Current Participation Rate Projections**



Source: Higher Education Simulation Model, Version 1.15, Higher Education Coordinating Board, June 2005.

Regional Workforce and Community Demand

According to census data, the region is home to 20,276 private non-farm businesses, over 75 percent of which are located in Snohomish County. As such, much of the region's employer demand is driven by the key industries in Snohomish; namely aerospace manufacturing, tourism, health care, biotechnology/bio-medical device, and information technology sectors. However, in contrast to Snohomish County's reliance on The Boeing Corporation for a large share of direct or related employment, the regional economy in Island and Skagit Counties is characterized by a great diversity of small businesses and large government-sector presence. Thus, occupations in service and retail, manufacturing, and education are key to the SIS region's continued economic prosperity.